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ORIGINAL LECTURES.

AN ADDRESS

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ON WITHDRAWING FROM HIS CHAIR, APRIL 10, 1884,

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GENTLEMEN: The lectures which, twenty years ago, I began in the University, I have now concluded. I have contributed, according to my ability, to the store of useful knowledge from which your predecessors, for more than a century, imbibed professional instruction. Everyone who, in his turn, comes to occupy a position such as I have had the honor to hold, is ambitious of deepening, and widening, and purifying the stream of knowledge, and, for such little time as the rush of events permits, of being held in remembrance as one who did not labor altogether in vain.

In entering upon the duties of this Chair, I was not altogether in my novitiate as a teacher; yet I felt that my task was one of exceptional responsibility, and to the very last this impression, instead of becoming lighter by familiarity, has grown more serious and profound. I have never for a moment been able to put away from me the impression that according as I discharged or failed to discharge my duties conscientiously would be my responsibility for the lives and health of those who were to become the patients of my pupils.

But no man lives up to his ideal. The further he advances in learning and experience, the higher will his ideal rise, and at the end of his career it will appear to him, more than ever, unattainable; and it must be so, for knowledge is infinite.

The one principle that has shaped and governed my instruction was to oppose fact to theory; to build up the walls of your education securely with the one hand, and with the other to defend you against the intrusion of hypothesis and unsubstantial theories, the most dangerous of all your enemies, because the most seductive to the young and ardent mind. I have often thought that the progress of knowledge would be more rapid, as well as more steady, if it were only possible to divide the speculative men from the practical, leaving a free field to the former wherein to manœuvre their phantom squadrons, and to the latter an equal opportunity of cultivating in peace the fruitful furrows ploughed by observation and experience. But such an expedient would be opposed to the practice of mankind, which also has the sanction of divine wisdom, to let the wheat and the tares grow together until each has brought forth its proper fruit, when the one can be garnered, and the other destroyed.

Well convinced that time never fails to do justice upon the false and fanciful, I have forborne to make that vivisection of them without anæsthetics, which reason and instinct suggested, and have devoted whatever knowledge and skill I possessed to the simple, if difficult, task of knowing and curing diseases. I have striven, in season, and perhaps out of season, to impress upon you that medicine is, first of all, an art, but an art that can only be successfully practised when the physician is able to recognize the individual diseases he must meet with in practice, and distinguish from one another those which are similar in appearance, but unlike in nature. This subject I would fain have had time and opportunity to illustrate by a detailed study of the history of medicine, and by showing you what no medical historian has yet elaborated, the pregnant truth that the real links of the historical chain are, above all, the practical men, the foundation of whose teaching was clinical; and that theorists in every age have been stumbling-blocks in the road of progress, or else the chains, the fetters, and the gags of those who, under proper guidance, would have worked for nature and for truth.

I have endeavored to keep before myself and before you, the great truths that in medicine whatever is not subsidiary to diagnosis and therapeutics is unessential if not superfluous; that it is quite as necessary for the physician to know when to abstain from the use of medicine as it is for him to prescribe when medication is necessary; that he must, as far as possible, see the end of a disease from its beginning; that he must never forget that medical art has a far higher range and aim than the prescription of drugs or even of food and hygienic means, and that when neither of these avails to ward off the fatal ending, it is still no small portion of his art to rid his patient's path of thorns if he cannot make it bloom with roses. Such knowledge not only quickens the patient's faith but confirms the physician's also, because he knows the limits of his power, and is neither deceived himself nor deceives others. The issues of life and death are not, indeed, in human hands, yet the physician, with his finite means, can sometimes render harmless the thunderbolt that threatens destruction. The power that permits death and the manifold causes that produce it has also given to man his love of knowledge and the intelligence to apply it for overcoming evil, and he has likewise implanted in us a conscience that will approve or condemn us as we use those gifts for the welfare or the hurt of our fellow-men. Sooner or later every one of us must sit in judgment on the conduct of his life. We cannot escape self-questioning. We must ask ourselves whether the talents we have received as natural gifts or developed by labor, have grown and multiplied as they should have done, or whether, at the end of our career, we have nothing more to show than the original handful of seed, grown hard and dry, and perhaps mouldy in our unprofitable possession.

To produce a harvest of knowledge that shall be worth gathering, demands at least as much labor and vigilance as the crops that minister to our material wants. In the earliest springtime of life the soil must be thoroughly

prepared for the seed, and the seed itself must be of the best quality. Education should begin from the very cradle, and in early life the habit of observation acquired which is of inestimable value in every pursuit. Then, if the child be destined for a professional life he should be systematically trained, and more and more strictly as he grows older, towards the field of knowledge he is destined to occupy. Thenceforth he must begin to fill his own treasure-house with the fruits of study and observation, not trusting wholly to his memory, which is unfaithful, but recording from time to time, if not day by day, all that is worth preserving. He should never forget that medicine, like all knowledge, has a past as well as a present and a future, and that in that past is the indispensable soil out of which improvement must grow. He should remember, too, that however closely related the several branches of medicine are to one another, each one in its turn is best learned by an almost exclusive devotion to it for a time, and when his barns are filled to bursting with his harvest, let him not forget that the grain has still to be winnowed. His fan must be in his hand to purge the threshing-floor of the dead, the unessential, the hypothetical, the fanciful, and, above all, the false. In all things truth must be his object, his inspiration, and his guide.

You have fallen upon a time in which medical knowledge far exceeds in amount and variety that of any previous era. The measure of it is most readily apprehended when we consider the extent of the medical literature of the day, and, in some respects, its superiority over that of any previous era. It is perhaps as distinctly indicated by the improvement of medical periodical literature as by any other sign. That it still leaves much to be desired is very true; but in every direction indications may be found that it is gaining in seriousness, dignity, solidity, and energy. Hardly less noticeable is the tendency, at least, of most of our medical colleges to recognize the need of a higher standard of education, while in a few, including the University, actual progress has been made by lengthening the period of professional training, and enlarging and perfecting its laboratories and clinical work. All of this is well, is praiseworthy, is hopeful. But it is not all that is necessary. One thing, at least, is lacking in nearly all of our colleges, and in the few where it exists it is in a formal and merely embryonic state, a promise rather than an achievement. I allude to the preliminary or entrance examination. This was one of the watch-words of the American Medical Association at its organization in 1848. In that body, and in the local medical societies that have concerned themselves with medical education, it has yearly been echoed and reëchoed until in the ears of many it has become a mere phrase without practical meaning. And yet, in truth, it lies at the foundation of all radical improvement in our educational system, for it needs no argument to prove that the merely medical education of otherwise uneducated young men will never elevate or dignify the medical profession.

If the nature of medical science and art is considered, it becomes plain that to embrace them a greater variety of knowledge, and a greater skill in the exercise of the mental faculties, are required than is demanded by any other professional pursuit whatever. Hence it is that in older countries than our own, where education is better understood and more easily managed, because managed by more competent men than with us, the laws prevent all unqualified persons from becoming members of the medical and, indeed, of every liberal profession. It is there universally understood that no one can be qualified even to enter upon the study of medicine, unless he has been trained in the classics, in mathematics, and in natural science. There it is taken for granted that no one destitute of classical education can appreciate either the spirit of modern medical literature, in the best of which the wisdom of the ancient world survives, or the value of doctrines, descriptions, precepts, and practices which, though apparently of modern origin, take their rise in the remotest periods of medicine; or the significance of words now in daily use which reveal only to the etymologist their essential and recondite meaning. In a word, it is taken for granted that no man can become a physician in the best sense of the word unless he is also a scholar, that the training of the mind which makes him one, also best enables him to form clear notions of things as well as thoughts, and to arrange his ideas in so orderly a manner that, whether for his own use or for the instruction of others, he will always find his knowledge ready and efficient. But that is a part only of the value of a liberal education to a physician. Hardly less valuable—and if estimated not by its material results, but by the mental and moral satisfaction it ensures—not less, but much more, valuable is it to the physician, as it is to every other man whose pursuits are as absorbing, as exacting, and as exhausting—is the culture of some extra-professional field of knowledge. In the hours of rest he may snatch during his busiest life, and in the years of repose that he looks forward to in the waning of his life's evening, he will then never be without the recreation of reading that refreshes his weariness more than idleness, and quickens his faculties by varying their exercise. Every young physician must, indeed, begin his career chiefly among the vulgar and illiterate, but in due time, and all the sooner the better he is prepared for it, he will enter the circle of the intelligent, the educated, and the refined, and then, if he is a mere dispenser of drugs or brandisher of instruments, he will fail to gain their esteem as a man, even while he commands their employment of him as a helper in their emergencies. But if he is a man of liberal education, of cultivated intelligence and taste, and has that large humanity which makes him feel instinctively that his patients are not diseases or injuries, but suffering human beings who may be influenced by psychical as well as by physical agencies, he will learn that mental medicine is often more potent than drugs, and that if in his therapeutics he has not included this agency, he lacks one-half of the power he ought to possess.

Some one may object, perhaps, that the picture I have drawn is an ideal one, and that young men who are educated in medicine cannot often be expected to reach it. Nevertheless, a true ambition would be degraded if it did not set before itself the highest possible attainment, if it did not feel dissatisfied with any system that fenced in its strivings and dwarfed its ideals. But true ambition is rational and not quixotic. It feels that its discontent with the present and its striving towards a better time to come must be subordinated to the laws that govern development in all living things.

When an institution, be it political, social, or educational, is discovered to be no longer adapted to the actual condition of a people, it can be safely modified only in accordance with the peculiarities of the people for which it was established. All history teaches the folly of supplanting it by another institution which was not made for the place or time, but was constructed according to some abstract notion of its usefulness and fitness. It is like ready-made clothing, which is suitable for the average man only, and can never perfectly fit any individual man. The mental qualities of young men are as various and unequal as their complexion, their stature, or their weight; and it can as little be expected that the same system of education will be adapted equally well to all, as that the uniforms from an army sutler's stock will fit becomingly or comfortably every soldier who is to wear them. And yet, practically, such uniforms *must* be worn, and as we very well know their defects do not prevent their wearers from bravely fighting and winning battles. In like manner the systematic education of professional men is no less necessary, and although it suits no one perfectly, it suits all well enough in the battle of life. The individual's education in common can never be the best; but it can always be improved, always made to suit a progressively increasing number. In proportion as the students who come to be clothed intellectually attain to a greater elevation and quality of mental development, the methods of education should be expanded to fit their intellectual height and breadth. So shall they no longer present the sad spectacle of manhood in the jacket and pinafore of childhood, or the ludicrous one of childhood tottering and stumbling in the garments of maturity.

Meanwhile, let us not expect nor attempt abrupt changes. The defect of all reformers is impatience. They insist that, because a principle is intrinsically true, it should forthwith be put into practice; that because a practice is right it should be enforced upon every one. It is not in this manner that good ends are reached, either by nature or by mankind. To take the most familiar illustration: religious doctrines and precepts have never yet leavened the whole of humanity, and crime and its punishments abound in nations that claim to be governed by the highest moral principles. The perfect law of right is opposed by passive ignorance, and moral progress by the tendency to wrong. Only inexperienced and impractical dreamers expect good to flow spontaneously and immediately from evil, or to see a defective system that has the vantage-ground of age swept away as soon as one that is esteemed better is ready to take its place. Such are apt to be the mistakes of those who take a microscopic view of things, whose vision is bounded by the narrow circle of personal relations and interests, and who forget that the questions to be solved are as wide as the whole profession of medicine, and to the end of time will involve dissident if not antagonistic opinions. But if it is impossible, upon a very close view of a subject, to see all of its parts and their relations to each other, it is equally impossible to do so if we take a standpoint above the clouds, where, if we have a wider field of vision, it is a very indistinct one, and where, if the atmosphere is clear, it is also so cold as to freeze humanity out of medicine. It behooves us to remember that medicine is, above all else, humane as well as human; that its beginning, middle, and end is to relieve suffering, and that whatever is outside of this may indeed be science of some sort, but certainly is not medicine.

In one form or another, the doctrine has come down to us from a remote period, *Ars medica tota est in observationibus*—the art of medicine is founded on experience alone. It is the business of science to explain what experience has established; but it is not the primary business of science to observe and connote facts. That is the function of rational empiricism. The application of the results of observation to definite ends constitutes an art. The explanation of those results, *i. e.*, the act of bringing them under some general law or principle, is a function of science. But whether science explains or fails to explain the art, the art is neither more nor less perfect as an art, any more than the eye was less perfect than now in its power of seeing before the structure of the organ or the laws of optics were discovered. Art is inherent in the nature of things and in man's mental constitution. Science is an artificial method designed to generalize the results of observation and experience. There was an art of painting and of sculpture before the laws of proportion and color were understood; and it need hardly be added that if Michael Angelo and Titian rivalled Phidias and Appelles, it was not because the former were better acquainted with the laws of proportion and harmony in form and color. There was an art of rhetoric before the laws of language were discovered; an art, and a science too, of chemistry before the atomic theory was invented; and there was a culinary art, and is at this day, which in its perfection makes ridiculous the laws that chemistry and physiology have promulgated for its government. There is also an art of medicine which no less completely eludes, or as flatly contradicts science, by means of empirical facts, and gives the palm to sagacity and common sense over laws formulated by experiment, and proclaimed with the conviction and imposing solemnity of a new delivery of the decalogue.

I do not make this attempt to show you whereabouts lie the quicksands that may engulf your most cherished hopes, and the rocks upon which they may be dashed, without knowing how prone the youthful mind is to be led astray by false lights, and how confident it feels of passing safely across the dangerous period of life. Unfortunately, the danger is either not seen at all, or is not regarded as danger, and the self-deceived physician, unconscious of his error, becomes an example, instead of a warning. But my object is not so much to convince your judgment, as to lead you to pursue studies that will lessen the risk of your falling into error. My plea for medical history is to induce you to examine it for yourself, being persuaded that you will learn from it that the unity and continuity of medical art have been maintained, not by theories of disease and of medicinal action, that have chased one another like jack-o'-lanterns along the road of time, but by the facts of observation honestly and laboriously accumulated from the beginning until now. This was the theme of a lecture that I delivered nearly forty years ago, and all these years of experience and study have so confirmed me in its truth that now, in this, my last public utterance, I cannot refrain from handing it over to you as the sum and substance of my teaching and the best legacy I can bequeath to all my pupils.

Nearly half a century ago, I was about to emerge, as some of you are now, from the chrysalis state of undergraduate. Surely, no butterfly sees the world brighter before it than this fledgling of medicine. How radiant and fearless is the spirit of youth when we stand upon the hill-top of hope, and seem to embrace the universe in our horizon. The freshness of the morning is in our limbs; the heart's fountain gives out only pure waters; our eyes glow as we turn eagerly to the rising sun, and "From mount to mount through Cloudland, gorgeous land!" we behold the peaks that we feel predestined to surmount. Upon the mist that veils the sun from us (and we thrill as we behold it) is projected a living picture of ourselves, but of gigantic proportions; and as we salute in it the prophetic image of our future greatness, it seems to return the salutation with the "All hail! that shall be king hereafter!" . . . . But the sun has risen to high noon; it has long ago dispelled the mist and its delusive phantoms; we have been wayfarers on the highway of life, foot-sore and weary, and perhaps soiled by its dust; possibly we may have been carried forwards in luxurious chariots; but never, *never*, we may be sure, have we gained possession of that estate in Cloudland which to our youthful eyes seemed so sure an inheritance. Even if we seized the golden apples, and for their possession overcame as fearful foes as the dragons that watched the garden of the Hesperides, too often we have left behind us the appetite that made us covet them, and they seem to turn to ashes on our lips.

Professional life, like every other, is a life of mingled joy and sorrow, of success and failure, of rewards and disappointments. The vastness and variety of the numerous departments of medicine, the nobleness and beneficence of its aims, fill the student who is worthy to pursue it, with perpetual admiration; and, as he masters each new field of research, inspires him with an enthusiasm which hardly any other study is so well fitted to excite. His confidence increases as he proceeds, and he is so sure of success that he can scarcely repress a feeling of pity not unmixed with contempt for the veterans who have grown gray in the practice of their art, and who have, perhaps, little reward to show for their long and faithful service but honorable scars and a premature old age, and who often lack even that retiring pension granted by their country to soldiers whose ambition and business it is to destroy life and not to save it. The proverb tells us that "the first step is always the most difficult," but the young physician takes that step with braced sinews and a heart swelling with hope. It is the steps that follow which cost, when his disillusion has begun, and when he perceives that the theories which promised to form so sure a foundation for his practice have played him false. "Like little wanton boys that swim on bladders—but far beyond his depth," his "high-blown pride" at length breaks under him, and leaves him "weary and old with service, to the mercy of a rude stream that must forever hide him." Of all the splendid apparatus of science on which he staked his hopes, none does its work any longer, nor produces to good purpose, save only that which is moved by powers he had learned almost to despise, the authority of experience and the genius of common sense.

But, you will object, although the young cannot expect to possess the wisdom, the caution, the balanced judgment of the old, are their faith, hope, and enthusiasm to count for nothing? By no means. Wisdom is the fruit of a prudent man's experience, but faith and its attendant sentiments spring up in the virgin soul of youth, and shame on the hand that would blight or crush them! But it is none the less true that they who have learned life's lesson are bound to save from self-deception those who have it still to learn, and as far as possible warn them of the errors and pitfalls in which so many have seen their hopes perish. Surely the voyage of life will be neither less secure nor less pleasant if made with a chart that marks the places where storms occur, or shoals lie in wait for the unwary, and which shows at the end no El Dorado of the imagination but the homely haven where peace and honor dwell. Of all who hear me now, not one whose life is spared need fail of that attainment. Only two things are essential, to live uprightly and to be wisely industrious. Whoever does these things need not fear the future. If he become successful, eminent, famous, to them he must owe his success. If he remain poor, humble, and obscure, his clear conscience will stand him instead of much riches, and perhaps make his home all the sweeter for its homely virtues. These thoughts remind me that the physician belongs to a much larger family than is sheltered by the domestic roof, and to which he is bound by the strong, yet tender ties created not only by a common training, but by the constant and reciprocal interests of professional life. It is sometimes asked why the medical profession alone should require a code of ethics for the regulation of its conduct? The question is not without the flavor of a sneer, and implies that there must be something peculiarly perverting in the science of medicine, or corrupting in its practice which renders necessary so formal a statement of its moral duties. Let us consider the matter.

The moral government of mankind has never been entrusted to merely abstract propositions. The most ancient of moral codes, the Decalogue, maintains its authority unbroken by thousands of years. Their sum and substance are embodied in the two simple precepts of the founder of Christianity, and yet the former was expounded by Moses and his successors into an elaborate system of law, was adopted into Christianity, and thence by all the civilized nations of the world, until it has interfused the legislation under which we live at the present day, and not the legislation only but the usages of society in all ages. Wherever law reigned men who were similarly employed were drawn together into guilds and societies for the common benefit of their members, and in each statutes were enacted which enforced compliance with them by heavy penalties. Even among trades ethical rules existed, and when the learned professions were gathered into their respective colleges or faculties the privileges and rights of the members were counterbalanced by laws for the regulation of their conduct. The clergy alone were destitute of any specific ethical code, because they were held to be especially under the divine law from which all other codes emanated, and yet every religious community, of whatever denomination, possessed, and still possesses, special rules of conduct by which its members must be governed. The necessity of ethical codes arises from the fact every-

where and always recognized, that either through lack of instruction, or through a defective or perverted moral sense, or through mere heedlessness, men do fail more or less to conform their conduct to justice and equity.

If men were habitually virtuous and just, unselfish and generous, if they could always see themselves as others see them, and judge their own motives and actions as strictly as they judge of other men's, then, indeed, there would be but little need for ethical or religious laws, for "they that are whole need not a physician." But law is nature's medicine for nature's defects and errors. Whoever imagines that he needs it not, that he possesses an inner light that will prevent his feet from straying into the paths of error and enable him to decide justly in every conjuncture of life, is more to be wondered at for his boldness than admired for his modesty, for he lifts himself into a judgment seat where even Solomon did not dare to sit.

I have said that the relations of a physician to his brethren and to society differ widely from those of other professional men, and, indeed, of all other men whatever. The emulation and rivalry of clergymen and lawyers are, for the most part, displayed before the eyes of the world, so that there is no special opportunity for an evil-minded man of either profession to back-bite or malign his brethren. Moreover, he knows that if he offends in this manner, the court may affix a stigma to his name, or the religious body, or the superior, upon whom he depends, may ruin him by an ecclesiastical condemnation. In the medical profession there is no tribunal which is under such imperative obligations to act, or enforce its decisions so rigidly. Hence, one necessity of a code of ethics. But another, already implied, is even more cogent. The physician is the only human being who is habitually admitted behind the scenes of life's stage. He is the depository of secrets to which even a confessor's ear is a stranger—secrets on which station, honor, and life itself may depend; and, even when not so burdened, he is more than anyone else the confidant and friend of those whose diseases he has healed. He is often the guardian of families that put their trust in him. Is it any wonder, therefore, that he should be jealous of the intrusion of a rival, or even of a friend, upon his preserves, and that, the evil of human nature aiding, the rival should endeavor to supplant him, and that thereout coldness, estrangement, animosity, evil speaking, and ill treatment should arise? Or is it surprising that the very confidential relations of a physician to his patient should expose him to the temptation to do wrong, and that he should, therefore, be warned by written laws of the danger he incurs?

These are the grounds out of which the ethical principles of the British and the code of the American medical profession grew, and which inspired the works of French and German writers on the same subject. They are the principles of honor, morality, and whatever is best in modern civilization, and, therefore, should be had in respect by all. It is a sign of decadence in the American social and medical systems that such laws are treated as obsolete or superfluous, and sneered at as fit only for children in leading-strings. Let me, as the parting counsel of one not without experience of life, adjure you to hold fast to this rock of safety, and, far from aiding to abrogate it, to strengthen and perpetuate it by every means in your power.

Impatience of authority and restraint has, perhaps, a deeper source than I have yet indicated. Its most conspicuous and violent outbreak occurred in France a century ago, and for a time covered the country with ruins steeped in blood. In our own day, the rebellion against law, if less sanguinary and destructive, is not less vehement, and is far more extended. Its name is Nihilism, and its creed is the denial of whatever has been known as religion, a hatred of all the virtues that are the fruit of faith, and a contempt of the obligations imposed by law. It tends to rob man of trust in whatever has been loved or respected in religion, in law, in the love and authority of parents, in the affection and obedience of children, in virtue, in duty, in honor, and in the established order of things that links the present to the past and to the future, making it the offspring of the one and the parent of the other.

If it were possible for this egoistic materialism to endure and prevail, the winter of humanity would indeed be near at hand, in which all signs of life, all progress and development, all beauty and nobility would be frozen out of it, and mankind would be reduced to a lower moral level than the beasts of the field. A world without faith! A world without love! As easy were it to conceive of a world without light or heat. In such a chaos what would become of all those institutions that have been established, perfected, and reverenced by advancing civilization? Conceive, for a moment, a community where no song of bell nor inward voice called to worship; where justice had become deaf as well as blind, because every man claimed to be a law unto himself; where there was no balm to soothe, no physician to cure, no right of property, no sacredness of person, where, in a word, mankind had lost whatever has hitherto distinguished humanity. If you can imagine such a herd of human beings — for it will no longer be a society or a community—you may behold in it a picture of the one that will assuredly arise if these nihilistic doctrines, this worship of self, this scorn of faith, this contempt of the past and exaltation of the present should prevail.

Let me plead with you to shun these poisonous principles which tend to the destruction of all that has been held noblest and best by the wise and good of every age; principles which put farther asunder the nations, communities, and individuals whom the physical improvements of the age should bind together and at last fuse into one. Faith is the parent and preserver of all good works. Unbelief, like Saturn, devours its own children. Faith is to man's nature what sunlight is to the world, clothing it with beauty and life; while unbelief is like the moon, in which the sun's rays create neither motion nor color, but fall forever upon its lifeless orb. Without faith, man's ambition is but narrow selfishness, contemptuous of the historic past on which it is compelled to build, and careless of what evil germs it may plant to be developed in the future. The higher a man rises in his humanity, the more clearly does he feel himself to be a link between the past and the future; the more fully recognize that what he has received that also must he transmit, increased, perfected, and consecrated by that spirit of love for humanity without which "good gifts wax poor."

It has again and again been said, of old and in our own day, that the physician's office is a priesthood, a service of the divine for the sake of the human. It does not exist for the discussion of scientific problems, except in so far as they relate to the prevention and cure of disease. Whatever is contrary to this may be science, but it is not medicine, and he who practises medicine in an exclusively scientific spirit very soon divorces his affection from his life's work, and leaves it barren, spiritless, and unsatisfying. No man can become a great physician whose heart is not in his work at least as much as his intellect. It is a work of charity and love, of self-denial and long suffering, and yet, like all work that crushes down the selfishness of the human heart, its rewards are beyond price, and can be understood only by him who receives them. Many of you have heard of the great anatomist Vesalius, and seen the print that illustrates the devout spirit with which he pursued his immortal investigations even under the ban of religious persecution. By such a spirit ought we all to be guided and controlled, never divorcing from science and art the divine sentiment of their brotherhood to one another and to every human being that needs the succor of our skill.

Other subjects there are, besides those I have caused to pass so rapidly before you that I may well fear they will leave but an indistinct impression, subjects hardly less urgent for consideration—but I must hasten to bring this, our last public interview, to a close. Looking back over the score of years which divides the beginning from the end of my professorial career in the University, and comparing the classes of the one period with those of the other, I cannot avoid recognizing the steadily improving culture of the students I have had the pleasure of addressing, and that during the later years of my experience the classes have been much more receptive of knowledge and far better able to appreciate it than their predecessors. In former times, after the examination of certain candidates for the degree, I have felt my spirit sink under the thought that they were to be entrusted with the care of health and life. I did not blame them, I pitied them; but I did blame and utterly condemn the system which introduced such persons into the medical profession. You have lived under a different dispensation; and during the years that it has been established, I have been spared the pain and the shame which were once the heaviest burdens of my office. I have enjoyed the satisfaction of seeing reflected in your faces an intelligent and interested appreciation of what it had become a pleasure to teach. This sympathy with my audience has been the sharpest spur to my endeavors to be worthy both of my subject and of them. I have felt that in emphasizing and reiterating certain views and precepts I was teaching a lesson not to be learned by rote, but that would sink deep and always remain in the retentive minds of my hearers. Never before did I feel so strongly impressed with the dignity as well as the responsibility of the teacher of medicine. And hence it is that, standing now upon the further verge of my professorial career, I can bid it farewell with a cheerful and contented spirit, satisfied that in the future those who may hold this Chair will be still more worthy teachers, and that your successors will be still more accomplished students.

To those who have followed my lectures, I return my heartfelt thanks for their great courtesy and consideration, and, above all, for that interested attention which is the best evidence a teacher can receive that his labor is not in vain. To you, to all who hear me, I offer my most earnest wishes for your success in life, bidding you to love mankind, to love your profession, and, above all, to LOVE TRUTH.

ORIGINAL ARTICLES.

SPASMODIC SWALLOWING, OR RETRACTION OF THE TONGUE.[1]

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MY attention was called to this rare accident in the following way. In the latter part of last month, I was attending a young lady for violent idiosyncratic coryza, which presented all the symptoms of hay asthma. According to the history she gave, she has been subject to these attacks for about three years. They are not brought on by the emanations from grasses or flowers, and they are more frequent during the winter than the summer. The more usual exciting causes are foul odors, dust of flour, and ordinary dust, and she said that the same effect had been produced by almost all the local applications used for the relief of the chronic nasal catarrh from which she also suffered. During this present attack, breathing through the nose was much interfered with; there were considerable dyspnœa, especially on lying down, and a sense of constriction over the upper part of the sternum. The dyspnœa was unlike that of asthma, to which she had an inherited predisposition, in being distinctly inspiratory in character, though the expiration was also somewhat embarrassed. Examination of the chest revealed only mucous râles in the bronchi of medium size.

Although these attacks had only troubled her during the past three years, the chronic catarrh, which so generally is one of the strong predisposing causes of idiosyncratic coryza, commenced in her eleventh year, and was first noticed after prolonged exposure to a severe snow-storm. Since that time also she has had two attacks of diphtheria, one of them especially severe, and affecting the nose. The form of the catarrh was hypertrophic.

She was recovering from her attack with more than usual rapidity and ease, and was expecting to resume her ordinary duties the next day, and I was about to commence the treatment of the chronic trouble, when, about 9 P.M. on the 2d inst., I was hastily summoned to her, the messenger stating that she was choking. Putting what seemed to be needed into my satchel, I started off at once, expecting to find her in one of her ordinary attacks of more than usual severity. When I arrived, it was evident from the surroundings, that her attendants had been very much alarmed, though the more urgent symp-

[1] Read before the Baltimore Medical Association, March 24, 1884.

toms had been relieved. The history of the attack was as follows: Shortly after I had left her, early in the afternoon, she began to notice a sensation of numbness on the left side of the tongue, and a sense of trembling in it. The sensation afterwards extended to the other side of the organ. She took no special account of it, but had some difficulty in pronouncing certain words. This, she said, was not very unusual with her, and she attributed it to the fact that she had always been considered a little tongue-tied. In the evening, however, her friend in reading came across the word "biliary," which, not understanding, she tried to explain to her, but found it impossible to pronounce it. Soon after, she felt a great desire to swallow, and suddenly felt her tongue fly back down her throat, so as to prevent her breathing. The spasm was a tonic one, and lasted about half an hour. As she had heard of the accident of the tongue falling back during chloroform inhalation, and had, from nursing and other means, an intelligent idea of medicine, with great presence of mind she seized her tongue, and drew it forward, and found her breathing at once relieved. The moment her hold relaxed, the tongue was again forcibly drawn back. She found some relief in taking very small sips of black coffee, and noticed that pressure behind the rami of the lower jaw helped to lessen the distress. She remained calm and self-possessed, and showed none of the commonly known hysterical symptoms. Every few minutes, I noticed, there would be a convulsive movement of swallowing, and there was considerable pain. I immediately gave her some whiffs of chloroform, which afforded instant change in her sensations, and relieved the spasmodic movements for a time.

Except when the tongue was drawn back there was no interference with respiration, nor was there any acceleration of the breathing, nor of the pulse, which remained regular and of fair strength.

Thirty grains of bromide of potassium every two or three hours were ordered. I remained with her until about midnight, administering more chloroform when the tendency seemed to be returning, and gave directions that, should there be any symptoms of another attack, half a teaspoonful of chloroform be poured upon a wet sponge at the bottom of a small, wide-mouthed jar, from which she was to inhale the fumes. As there was gastric disturbance, calomel in one-tenth grain doses was ordered.

The next morning I found her very weak. She had had two slight returns, which had been controlled by the chloroform, and had slept but little. I continued the bromide, and left a pair of forceps with her for more ready use in case of a recurrence of spasm. The further treatment consisted in iron and quinine, with nervous sedatives and tonics, and good food. After the next evening no symptom of a return appeared. As the attack was going off, she referred the pain also to the soft palate, and the sensation of numbness she had felt in her tongue went off as it had come on, affecting the left side last. This was the only attack she had ever had, and it was described as entirely unlike the spasmodic affection of the air-passages to which she was accustomed. The history of the case and symptoms also exclude any diagnosis, but the one I have given—that it was a case of so-called swallowing of the tongue. It will be noticed that the word she was unable to speak at the commencement of the attack is rich in linguals, "l" and "r" being the emphatic letters. For a fortnight after this there was great debility, which gradually yielded to treatment.

I have entered thus minutely into the history of the case, because of its extreme rarity. Dr. Ingalls, of Chicago, reported a case to the American Laryngological Society in 1880.[1] He said that he had heard of another instance from non-professional sources, but knew of no other case of the kind. The other members of the Society, being thus challenged, reported no similar case. Dr. J. Solis Cohen[2] merely remarked that the name "Swallowing of the Tongue," was an incorrect one, and that he had had a patient who complained of the tongue flapping up against the roof of the mouth, who was cured by strong brandy. It is fair, therefore, to assume that none of the distinguished gentlemen then present had met with a similar case.

Dr. Ingalls's patient was an extremely hysterical person. Her attack had been preceded by hysterical convulsions. She was improving when, after eating some soup, there was an eructation of gas followed by suffocation. The doctor was able clearly to establish the diagnosis, as I have been, and, finally, during the last attack the impending suffocation was prevented by pulling the tongue forward with forceps. General treatment was resorted to. After looking through a large amount of literature on the subject, as well as many of the current periodicals, I have not met with any similar case on record as far as concerns the adult.[3]

In infants and young children the case is different. In them the tongue is a much more dangerous organ. According to Hennig,[4] who enters pretty thoroughly into the subject, especially the more recent literature, Petit, in 1742, was the first to describe the accident. His first case was fatal; but in his subsequent experience he was able to prevent death by mechanical means, and devised a

[1] Archives of Laryngology, N. Y., 1881, ii. pp. 134, 136. Also Ingalls, Diseases of the Chest, Throat, etc., N. Y., 1881.

[2] Archiv. of Laryng., 1881, p. 181. Dr. Edwin Morris, F.R.C.S., (British Medical Journal, August 31, 1872, p. 242) reports a case of dislocation of lower jaw, during sleep, through sucking of the tongue in a young lady. Spasm of the tongue, affecting the protrusors, is more frequent. See THE MEDICAL NEWS (Phila.), July 7, 1883, p. 8. Medical Record (N. Y.), December 8, 1883, p. 625. Rhein, Westphal Jahrb. f. Med. and Chir., Ham., 1826, xi. St. 2, p. 34. An article, Ueber Idiopathischen Zungen-krampf, O. Berger, Neurol. Centralb., Leipzig, 1882, i. 49–52, was mentioned in the Card Catalogue of the Library of the Surgeon-General's Office, Washington, but was out of the Library.

[3] C. H. Breidenstein, Krank. der Zunge (Neuest. Samml. der Auserlesenste und Neueste Abhandlungen f. Wundärzte, 5 St., pp. 258–286, Leipzig, 1792) mentions the accident, but records no case. In the discussion which followed the reading of this paper, Prof. Ashby spoke of having seen a report of a case somewhat like this, by Dr. Wood, editor of the North Carolina Medical Journal, about eighteen months since.

[4] Ueber Sogenanntes Verschlucken der Zunge, von C. Hennig, Leipzig, Jahrb. f. Kinderheilk., Leipzig, 1877, p. 299. An abstract of this is given in the American Journal of Obstetrics, January, 1878, p. 208.

bandage for holding the organ in place. I found this bandage described by Herr Dr. Stammer[1] as very clumsy. Petit refers his cases to the too deep cutting of the frenum in tongue-tie, or to congenital deficiency of the frenum. This cause is also given by Dr. Veh, of Moscow, as one not infrequently leading to the accident in Russia, as also by Dr. Stammer in his case, recorded by Dr. A. Dröste.[1]

Another frequent cause is whooping-cough. Hennig, in explaining the *modus operandi* in these cases, states that during the violent expirations the under surface of the tongue in infants who have cut the two lower incisors is wounded by the teeth on both sides of the frenum, giving rise to ulcerations. Afterwards, during a forcible inspiration, the tongue is carried back by suction, and the pain from the ulcerations adding its influence, the tip of the tongue becomes curved upwards and backwards, and may be caught between the palate and the base of the tongue, in which case the ensuing expiration cannot dislodge it, and sudden death is the result. This was the case in two infants in neither of whom had there been any cutting of the frenum. Another instance is given by Dr. Seydeler[2] of a fourteen-day old infant who, on being given for the first time a few drops of medicine from a spoon, not knowing what to do under the unusual circumstances, swallowed its tongue, and was only saved from impending death by the doctor drawing the tongue forward. In this case the tip was not turned upward.

The tongue gives trouble also in the newly born during attacks of coryza.[3] The infant, in sleep, breathes through the nose almost exclusively, while the tongue lies close against the soft palate. In coryza it cannot do this, and, especially if it be lying on its back, the tongue is apt to remain in its usual position, and to lie even more firmly fixed against the soft palate. Hence arise dangerous suffocative attacks. That this is the cause of them is shown by the fact that changing the position of the child diminishes the frequency of the attacks, as well as by the relief afforded by pulling forward the tongue. It is not necessary to refer to similar accidents in chloroform inhalations, or to the danger of it after operations on the lower jaw.

It will be seen that in their causation and history there is very little in common between the so-called swallowing of the tongue in children and in the case of the lady I have just reported, or the one reported by Prof. Ingalls. In children, with, perhaps, the exception of the infant reported by Dr. Seydeler, the cause is simply mechanical, the tongue either falls back, as it does in chloroform narcosis and after operations on the lower jaw, or it is drawn back by suction. In the adult, the affection is clearly spasmodic, and has nothing to do with the position of the patient. Prof. Ingalls rightly considered the spasm in his case to be due to hysteria, and this may be the true explanation of my case also, although there was no previous history of hysteria, or any other hysterical symptom during the attack. It is, perhaps, more probable that it was due to the same reflex excitation in the nose that was almost certainly the cause of the asthmatic attacks. Another possible exciting cause was the gastric irritation which was present in her case, as well as in that reported by Dr. Ingalls. The prolonged debility which followed the attack might point to a more serious origin than reflex action (for days the mere walking across the room would weary her), but a careful study of the symptoms and history of the case seems to exclude a central origin, and after her previous attacks of idiosyncratic coryza, her strength has returned but slowly. In the present state of our knowledge, the cause must remain in some doubt. The muscles involved were the hyoglossus and styloglossus especially, though apparently most of the muscles concerned in the first act of deglutition were affected, as the ease gained by pressure behind the rami of the jaw, and the pain referred to the soft palate, after the attack passed off, further indicate.

As the two classes of cases are so distinct, they should be distinguished by different names, and as "Swallowing the Tongue" has been applied so long to the accident when induced by mechanical causes, I would suggest for the affection I have described the name of "Spasmodic Retraction of the Tongue."

As these attacks are of immediate danger to the patient, it is of the utmost importance to fulfil the first indication for treatment, which is to seize the tongue and draw it forcibly forward, and to maintain it in that position. The patient or the attendants should be furnished with forceps and instructed how to use them. After the first attack, the second does not occur without premonitory symptoms, readily recognizable by the patient, who has a most vivid and painful recollection of the preceding seizure. As soon as these symptoms appear—involuntary efforts at swallowing being among the most prominent—inhalations of chloroform or other anæsthetic should be used. With careful directions, it is quite safe to let the attendants administer the chloroform without the physician. The method of dropping a moist sponge, on which half a teaspoonful of chloroform has been poured, into a wide-mouthed jar is a good and safe one, for it is not necessary to inhale much, and the dose may be repeated. This will almost certainly ward off the attack. After the tongue has been drawn out the chloroform may be used while the spasm is still on. Other methods may be employed, such as dashing cold water on the face, etc.

As the affection is accompanied and followed by great nervous prostration, nervous sedatives must soon be followed by nervous stimulants, as asafœtida and valerian. Ferruginous tonics and general supporting treatment are indicated.

[1] Quoted by A. Dröste, Ein Fall vom Sogenannten Verschlucken der Zunge, Wochenschrift f. d. ges. Heilkunde, Berlin, 1834, iii. p. 122.

[2] Quoted by Hennig. Roger (Journ. f. Kinderkrank., 41, 12, 1863) gives a case in which suffocative attacks at night occurred from the tongue falling back against enlarged tonsils during sleep.

[3] Ziemssen, Handb., xii., Anhang, S. 257. See also Schnupfen der Saulinge, Zeitschrift f. ration. Med. (Henle und Pfenfer) 3 Reihe, 23 Band, 1865, S. 227. Bouchut, Handb. der Kinderkrank., übersetzt von Bischoff, Würzburg, 1862, was referred to, but I could not procure it. See also Cohen, Diseases of the Throat, New York, 1880, p. 628.

COMPLETE ABSENCE OF VAGINA, WITH ATRESIA OF THE UTERUS.

By J. C. REEVE, M.D.,
of Dayton, Ohio.

Cases of the class to which this one belongs deserve record from their extreme rarity, even were there no unsettled points as to the best methods of conducting measures for their relief.

I was called to see Miss L., just past fourteen years of age. Learned from her parents that she was born at or about the end of the eighth month of gestation, and was very small at birth, weighing not more than four pounds. She had generally enjoyed good health until a little over a year ago, when her change of form and appearance seemed to indicate that she had arrived at puberty. About that time she began to suffer attacks of pain, which recurred periodically at about monthly intervals, and which had increased in severity, and gradually lost their periodical character, until now they were extreme in degree, even sometimes causing her to roll on the floor, and came on at uncertain intervals of a few days or a week at most, and lasted several days at a time.

There was one peculiarity of these attacks deserving mention—the position she assumed when suffering. She was accustomed to stand on her left leg, the right one flexed, with the ankle resting just above the left knee. Standing thus, and leaning her hands on some article of furniture, she passed many hours together; on one occasion, fourteen hours, as her parents aver. For a few minutes at a time now and then she knelt, and latterly had been standing sometimes on the right leg, but with the left in the same relative position as above described. This seems to have been one of those instinctive positions in which patients find that they get mitigation of their sufferings.

For four months she had been under the care of a physician, an eclectic, who had been administering medicines to "bring on her turns." She also had been seen once by a regular physician, but no examination had been made or proposed until she came under the care of the gentleman with whom I saw her—Dr. W. P. Weaver, of Miamisburg, Ohio.

Examination showed, in the hypogastric region, a round, smooth, elastic tumor, which extended upwards to the left, and nearly as high as the umbilicus. No opening could be discovered between the labia. By the rectum a round, smooth, elastic body could be felt projecting downwards into the pelvis and its identity with the tumor felt through the abdominal walls was verified. No trace of a vagina could be discovered, but all examination in this direction was very unsatisfactory, from her exceedingly nervous condition, the result of the pain she had suffered.

The nature of the case having been explained, and the necessity of an operation stated, I returned in about a week to perform it. A hypodermic injection of morphia and atropia was administered, and about twenty minutes afterwards she was placed under the influence of the mixed vapors [A. 1, C. 2, E. 3]. She was put in the lithotomy position, and a careful examination was then made, but no vaginal canal could be discovered; there was no vulvar opening—all was solid below the opening of the urethra—and by the rectum, no trace of a vagina, no fibrous cord or thickening to represent one could be felt. A sound having been placed in the urethra, and held by Dr. Weaver, one finger of the left hand was introduced into the rectum, and a transverse incision made with scissors between the labia, and nicked above and below. I then bored with right forefinger upwards towards the uterus, and thus very easily channelled a passage up to the uterus. With a rectum-speculum this passage was then dilated, and afterwards, by the expansion of the blades of a Nott's trivalve speculum. In the next step of the operation vision was of no assistance, on account of oozing of blood, but neither by sight nor touch could any indication be found of a particular point at which to open the uterus. There was not even a dimple to mark the position of the os, nor was there any projecting portion like a cervix; the tumor was nearly globular in shape. I penetrated it with the largest sized trocar of an aspirator until resistance was felt to cease, and withdrew about an ounce of chocolate-colored fluid. The instrument then choked, the fluid being too thick to be withdrawn in this way. I then carefully introduced a bistoury in the same manner and turned it on its edge as it was withdrawn. Keeping my finger in contact with the opening, a uterine dilator was passed in and expanded until the finger passed freely into the uterine cavity. From four to six ounces of the same tenacious fluid escaped. The channel made was syringed out with a solution of carbolic acid, a large hollow tupelo tent placed in the uterus and supported by tampons of marine lint wet in the solution, thus completely filling the artificial canal.

Her recovery from the operation was uninterrupted. The syringe was used daily by the gentleman in charge of the case, and the lint changed. On the third day a large quantity, estimated at a quart, of the accumulated fluid was expelled. I saw her one week after the operation, when I could pass my finger readily up to the uterus, and she was then provided with a vaginal plug, and her mother instructed in its application. Two weeks afterwards, she menstruated naturally and without pain.

Whether the operation should be completed at a single sitting, and whether the uterus should be washed out antiseptically, are the open questions in regard to such cases as this. In regard to the first, it seems to me that there can be no doubt, even when the patient is not, as mine was, at a distance from the operator. The demand, the necessity, for relief are urgent, and it does not seem possible that greater safety will be secured by making successive steps to it, to say nothing of the mental influences on a nervous and timid girl. In regard to the second point, I presume there are few, in these days, who would not wash out the uterus thoroughly. I would not advance against it the plea that danger might arise from passage of the fluid through the Fallopian tubes into the peritoneal cavity. Any fear of such a result, where the imprisoned fluid

has been subjected to pressure, as in this case, for months from uterine contractions, can only be absurd. But safety would seem to be best secured here, as after labor, by efficient contraction of the uterus and obliteration of its cavity, and that where circumstances will allow it, measures to bring about these conditions are the ones for the operator to adopt. However, this is intended to be rather a record of facts, than a discussion of opinions, and the case is reported for whatever benefit may result from it.

THE PATHOLOGY, ETIOLOGY, PROPHYLAXIS, AND TREATMENT OF PUERPERAL FEVER, FROM THE VIENNA STANDPOINT.

BY W. W. JAGGARD, M.D.,
OF CHICAGO, ILL.

THE doctrines of the Vienna School of Obstetrics, upon the subject of puerperal fever, are clear and distinct, from a theoretical standpoint, while purely speculative tendencies have been checked by careful clinical observation and experience, and exact pathologico-anatomical investigation. The colossal material, facilities for observation and experiment, before, during, and after parturition, and the obligatory character of *post-mortem* examinations, afford a field for investigation of unparalleled scope. The protocols, containing minute, accurate records of each individual case, accumulating through long years of patient research, furnish corrective and corroborating statistical evidence.

Add to this the consideration of the names of the illustrious men who have engaged in the study of puerperal fever—Rokitansky, Oppolzer, Skoda, Billroth, Carl and Gustav Braun, Spaeth, Kundrat—and the teachings of this justly famous school are invested with a peculiar dignity, power, and authority.

It is the object of this paper to sketch briefly the salient points in the pathology, etiology, prophylaxis, and treatment of puerperal fever as taught and practised at the present time in Vienna.

I. PATHOLOGY: Puerperal fever is an infection fever, in which inflammations of the genital mucous membranes and serous membranes—most frequently the peritoneum, at times, also, the pleura or pericardium—constitute the most prominent anatomical changes, and possess something of a typical character in so far as a continued fever, of great intensity, with temperature elevations up to and above 41° C., usually coexists (Braun).

The site of the puerperal wound comprehends the entire extent of the mucous membrane lining the uterine cavity, and contributing to the formation of the decidua. The deeper strata of the mucous membrane, and, particularly, Friedländer's glandular layer, are laid bare at an early period in labor, when the fecundated ovum is propelled into the cervix. A broad, shallow surface, extending from the internal os to the fundus, is thus deprived of its epithelial covering, rendered accessible to the air and exploring finger, and infection may occur before any influence has been exerted by the trauma of labor. *It is possible, therefore, that puerperal fever may occur during the last weeks of pregnancy and during the first stage of labor.* That it does occur during these periods is a well-known clinical fact.[1]

When this puerperal wound is infected, the danger results from the qualitative and quantitative development of the blood and lymph vessels, and the neighboring peritoneum. Puerperal infection has its starting-point in a local lesion, which may be situated in or about the vulva, vagina, mucous membrane of the cervix, or the denuded intrauterine surface. Abrasion of the surface, in any one of these localities, is followed by an inflammatory infiltration, which results in the casting off of the superficial layers of the *mucosa*, in the form of a grayish-white or yellow membrane, and in the production of the so-called "puerperal" ulcers. These "puerperal" ulcers, small in extent, and shallow in depth, increase in both directions with astonishing rapidity, until they may occupy the entire vulvar, vaginal, cervical, or intrauterine expanse. About the vulva and in the vagina, stratum after stratum yields to the destructive process, until the perivulvar and perivaginal connective tissue is invaded; the cervix may alone be attacked but the intrauterine surface is more usually involved, the decidua thrown off, as grayish-yellow membranous shreds or fragile masses, and the *muscularis* laid bare.

Birch-Hirschfeld applies to this process the terms puerperal diphtheria, diphtheritic endocolpitis, and diphtheritic endometritis. He implies by this terminology a pseudomembranous necrosis of the *mucosa*, resulting from inflammatory infiltration and molecular destruction of its elements, essentially the same condition as diphtheria of wounds. He denies emphatically any relationship with diphtheritic angina. General unanimity of opinion upon these primary considerations prevails at the present day. The case is very different with the further course of the disease.

Buhl, in 1861, described three chief forms of puerperal fever, and this classification has been accepted in Vienna, in preference to the complicated and forced division of Spiegelberg.

Buhl's three forms of puerperal fever are:

1. Puerperal peritonitis, without pyæmia (endometritis, salpingitis).

2. Puerperal pyæmia, without peritonitis (metrophlebitis).

3. Puerperal pyæmia, with peritonitis (pyæmia with lymphangitis, parametritis).

1. *Puerperal peritonitis, without pyæmia*, includes those cases in which the inflammation extends from the endometrium through the tubes to the peritoneum. The tubes are enlarged, the *mucosa* swollen, injected, and pouts through the fimbriated extremeties; the lumina, increased in size, are filled with thick pus; the uterine *mucosa* presents the characteristic appearances of endometritis; the resulting peritonitis may be circumscribed or general. The external surface of the uterus is of a lively, vermilion color, and upon section fine red

[1] Carl Braun's Gynækologie, p. 853.

lines, due to the extravasation of blood between the muscular fibres, constituting apoplexy of the uterus, are noted.

This form is most frequent when there is no epidemic influence.

2. *Puerperal pyæmia, with peritonitis*, is developed when the infection gains access to the bloodvessels. Infection has its starting-point, by preference, from the placental site, where the endometritis produces ichorous destruction of the thrombi formed in the uterine sinuses. Thrombosis of the veins of the uterine walls, pampiniform and spermatic plexuses result, and the process of embolism is established. Metastatic abscesses are formed in the lungs, spleen, kidneys, and brain. Metastatic inflammation of the joints, serous cavities, superficial and intermuscular fasciæ, constituting phlegmasiæ—skin, constituting erysipelas—may occur. Ulcerative endocarditis is usually present. The spleen becomes enormously enlarged. The blood is fluid and thin, and putrefaction makes rapid progress after death. It is needless to add that such cases terminate fatally at an early period of the disease, with symptoms of profound toxæmia.

This form of puerperal fever is familiarly known as septicæmia.

3. *Puerperal pyæmia with peritonitis* arises when the poison is received into the lymphatics and connective tissue of the parametrium.

As the result of an antecedent puerperal endometritis, the intrauterine surface is covered by a layer of stinking, brownish-colored, decomposing decidua or pus. Ulcers and fissures, covered with molecular *débris*, are found in the cervix. Very rarely, the uterine walls, throughout their entire thickness, in smaller or larger areas, are involved in a gangrenous process; and a condition termed by Boër *Putrescentia uteri* results. The inflammatory process is usually propagated through the intramuscular connective tissue, and follows the lymphatic paths. The lymphatic vessels are seen, especially in the neighborhood of the tubal insertions and cervix, according to the direction of the section, as yellow, dilated, varicose vessels, or as round lumina, out of which pus flows copiously. The vicinity of the lymph vessels is infiltrated with pus; abscesses occur between bundles of muscular fibres, and are sometimes so near the *serosa* that they appear like vesicles.

From the uterine walls the inflammatory process reaches the pelvic connective tissue. The lymphatics, filled with pus, can be seen running through the broad ligaments to the *hili* of the ovaries, causing, at times, purulent infiltration and abscess formation in these organs. The pelvic connective tissue, at the same time with the lymphangitis, is involved in a proportionate parametritis, resulting in purulent collections and discolored serous effusions, shading off into lighter degrees of œdema. The inflammation may involve the connective tissue of the abdominal walls and lower extremities, where it frequently acquires an intense, phlegmonous character. The peritoneum is reached, through the subperitoneal connective tissue, usually upon both lateral surfaces of the uterus. The fimbriated extremities of the tubes become the seat of the inflammatory process. General peritonitis, with serous, fibrinous, purulent, or ichorous exudations, is rapidly developed, and may be extended through the diaphragm into the pleural cavities. *Meteorismus*, as the result of the serous infiltration of the *muscularis*, is marked. Parenchymatous degeneration of the liver, kidneys, and spleen, ulcerative endocarditis, usually accompany this form of the disease.

Microscopic examination of the uterine walls reveals diffuse infiltration of the intramuscular connective tissue by pus corpuscles and molecular *débris*. The muscular fibres are swollen, and the nuclei are dark colored. This condition of the intramuscular connective tissue and of the muscular fibres explains the extreme fragility and brittleness of the uterine walls in women suffering from puerperal fever.

The infection may arise in vulvar or vaginal "puerperal" ulcers, but the mode of origin sketched in the foregoing sentences represents the more usual condition.

The children of women affected with puerperal fever succumb frequently to the poison received through the maternal blood. The infection may occur during pregnancy, and this fact demonstrates, beyond possibility of doubt, the transference of the poison by the maternal fluids. Ecchymoses and inflammations of the serous cavities, phlebitis and umbilical arteritis are usually observed. The umbilicus is frequently the place of invasion. (Braun.)

This form of puerperal fever is of most frequent occurrence, and is referred by Virchow to the class of phlegmonous inflammations and pseudo-erysipelas.

These different forms of puerperal fever may occur simultaneously in the same epidemic. It is not necessary, however, to invoke a qualitative difference in the infection, or "*materia peccans.*" The variance in symptomatology and pathologico-anatomical conditions is fully explained by the different paths selected by the poison. (Birch-Hirschfeld.)

The results of all pathologico-anatomical investigation of puerperal fever point to the reception of a disease which has its origin in the genital canal, and demonstrate the occurrence of relationships in puerperal fever of exactly the same nature as in the pyæmic infection of wounds. (Braun.)

II. Etiology: The general proposition that puerperal fever is infectious, that is, is transferable from a diseased to a healthy woman, may be regarded as demonstrated.

Cruveilhier (1831), Semmelweis (1847), Simpson (1850), Rokitansky, Skoda, Oppolzer, Winckel (1869), Spiegelberg (1870), Schroeder (1874), Landau (1874), Lee (1875), Kehrer (1875), and numerous other observers have abundantly established this proposition. It is a fact of positive knowledge. The nature of the infection, the "*materia peccans*," is a controversial subject.

Before entering upon the discussion of this subject, it is well to repeat the statement, that the Vienna School of Obstetrics recognizes strict analogy between puerperal fever and septico-pyæmic processes in general.

Three theories as to the nature of the infection,

materia peccans, of puerperal fever, are entitled to consideration. They are:

A. The bacterial theory.

B. Billroth's phlogistic zymoid and putrid poison theory.

C. The miasmatic theory.

A. The Bacterial Theory.—Mayrhofer (1865) demonstrated the presence of numerous vibriones in active motion in the secretions from the genital canal of patients suffering from puerperal fever, in the Vienna obstetrical clinics. Virchow and Buhl described, about the same time, fine molecular masses in similar secretions. Later, Waldeyer corroborated the researches of Mayrhofer, and demonstrated the presence of vibriones in the covering of "puerperal ulcers," lumina of the uterine lymphatics, infiltrations into the connective tissues of the parametrium, exudations into serous cavities, and asserted that the molecular masses of Virchow and Buhl were composed of micro-organisms. Heiberg followed, and supported Mayrhofer so far as concerned the actual presence of vibriones, but expressed himself reservedly as to their causative relation. Orth emphasized the discoveries of his predecessors, but claimed that the sphero- and not the rod-bacteria were causative. Birch-Hirschfeld recognizes the position of the latter observer. Klebs, Rindfleisch, Cohn, Recklinghausen, and Hueter may be added to the number of distinguished pathologists who believe bacteria to be the essential cause in all septico-pyæmic processes.

B. Billroth's Theory of Phlogistic Zymoid and Putrid Poison.—Billroth (1874) opposed the bacterial theory by his thorough and exact researches into the nature of accidental wound fever. Billroth's theory receives its best exposition in his own words:

"The etiological relationship of bacteria to septic diseases and putrescence of the blood is by no means to be regarded as demonstrated.

"Out of the acutely inflamed connective tissue, is added to the pus a ferment similar to zymoid material (Phlogistic Zymoid), which induces its decomposition. By this means the pus, before an uncongenial soil for the development of micrococci, now becomes a peculiarly favorable menstruum for their multiplication—it is unsettled whether this zymoid, as such, is assimilated by the micrococci, or whether it induces a decomposition in the pus upon the products of which the micrococci live. Zymoid and micrococci can then no longer be separated from the pus, without the annihilation of its zymoid action.

"The further existence and action of the zymoid are not conditioned upon the vegetation of the micrococci; the decomposition continues even if the micrococci perish.

"By Phlogistic Zymoid is understood a substance which, produced by inflammation, is capable again of producing inflammation.

"There is no doubt that coccobacteria are not necessary to produce pernicious forms of acute inflammations, and they are not necessary in the diffusion of these inflammations throughout the body; that coccobacterial vegetations are not, as such, ferment producers; that these organisms must bring within themselves, or upon themselves, the specifically active substance; that they are not ferment bearers under all circumstances, but are only then ferment bearers when they come out of a fluid in which the specific ferment already existed.

"Every acute inflammation has a stage in which it produces secretions capable of infection, and the infective capability of diphtheritic secretions possesses no peculiarity, except that this stage lasts a peculiarly long period of time.

"Recently Panum has obtained from macerating, decomposing meat a substance, soluble in water, and containing no albumen—so-called extract putrid poison; in addition to this, he found a second substance of exquisitely narcotic action. Bergmann obtained from decomposing beer-yeast, a crystallizing body, which he calls sepsin. Finally, Zuelzer and Sonnenschein have discovered a substance resembling an alkaloid, of septic action."

The phlogistic zymoid and putrid poison are closely related, and ultimately identical, since the chemical processes within the parenchyma of acutely inflamed tissue and decomposing tissue are analogous.

Rokitansky, Jr., (1874) found bacteria in the lochial discharges of healthy puerperal women, and Haussmann discovered micrococci in eleven per cent. of pregnant and two per cent. of non-pregnant women. Septic infection occurred in none of the women. Wolf and Landau have expressed themselves in opposition to the bacterial theory. Panum and Küssner have demonstrated that micrococci are not the direct bearers of infection. A putrescent fluid, after eleven hours' boiling and destruction of all micrococci, retained its infectious action. The researches of Billroth, Tiegel, and Bechamps, supported by those of Ranke, Demarquay, and Hueter, go far to show that bacteria are normal constituents of the human organism. Finally, no unanimity of opinion exists among the exponents of the bacterial theory; no two observers of prominence agree in all particulars. In the words of Carl Braun:

"The significance of bacteria in the etiology of surgical and puerperal fever seems to be a subordinate one; they seem to have no influence upon the origin, and, perhaps, even no important influence upon the course of surgical fever. The putrid poison kills and produces fever, with or without bacteria."

C. The Miasmatic Theory—By miasm is understood a fungacious contagium; not a gaseous body, but dried spores of vegetable organisms, which, being brought in direct contact with wounds, cause infection. This theory has no tangible basis; it has not been demonstrated that these dried spores are in the condition to preserve their viability. Vegetable organisms are destroyed by high temperatures, while boiling for hours has no effect upon sepsin. The theory, therefore, is totally inadequate to the explanation of the phenomena.

The causes of puerperal fever are:

a. Lacerated and contused wounds, gangrene of the genitals, as the result of difficult labors.

b. Decomposition of portions of the placenta or membranes retained within the uterine cavity.

c. Increase of a primary endometritis, vaginitis, or vulvitis to a parenchymatous inflammation, during the puerperium. The catarrhal secretions flow over the injured mucous membranes, act as irritants, and produce ulcers, which may give

origin to phlegmonous inflammations. The term autoinfection has been bestowed upon this condition. Virchow, Winckel, and Braun are of the opinion that an infection of the injured mucous membranes is unnecessary. The increase of the catarrhal inflammation, by means of chemical and mechanical irritants, to a phlegmonous form is amply sufficient to explain the phenomena.

d. Infection of injured portions of the genitals with secretions from ichorous wounds, or cadaveric substances. Infection may be conveyed by the air penetrating to the parts, or by contact with the exploring finger or instrument.

Occurrence: Individual cases of puerperal fever occur in hospitals and private dwellings, among the rich and poor, in people of the most diversified constitutions, and at all periods of life. *Individual cases and epidemics of puerperal fever occur quite as frequently in private practice as in well-conducted hospitals.* Winckel demonstrated the truth of this proposition, so far as pertains to the kingdom of Saxony. Upon investigation of the records of fourteen hundred and eighty-six midwives, he found that more than seven per cent. of all midwives of the land, in the year 1874, reported a mortality of three per cent. of their puerperal patients from puerperal fever.

(*To be concluded.*)

MEDICAL PROGRESS.

The Physiological Action of Bromoform.—Dr. Caj. Frieh. von Horoch, of Vienna, at the close of a paper on this subject, draws the following conclusions:

1. The respiration shows no noteworthy variations.

2. The motor centres of the heart do not suffer under the narcosis, and the pulse remains strong and normally frequent.

3. The peripheral ends of the vagi retain their irritability.

4. The blood-pressure, lowered by the narcosis, stands, in dogs, between fifty-seven and thirty-six millimetres. If in the course of an experiment narcosis is stopped, the blood-pressure becomes normal, but falls again when the animal is again narcotized. The centres which control innervation of the bloodvessels do not seem to be so sensitive to electrical stimuli as in the normal state.

5. The reflex irritability was always entirely lost; irritation of the sciatic nerves with the strongest currents had no influence on the blood-pressure.

6. Direct irritation of the vaso-motors (splanchnics) gave no results in deep narcosis, and relatively slight results in slight narcosis.

7. The irritability of the motor centres of the cerebral cortex was completely lost in deep narcosis; in this respect bromoform seems to be similar to other anæsthetics.

8. The temperature gradually sinks in experiments on animals—in dogs, as much as 5° F.—*Mediz. Jahrb.*, 1883, Hft. iii., iv.

Œsophagotomy.—Prof. Edward Lawrie, of the Lahore Medical School, reports the case of a woman, æt. 35 years, who was admitted into Mayo Hospital, on December 14, 1883, with a large gall-nut impacted in the gullet. She had been suffering previously from an affection of the eye, and was told by a friend that if she held a gall-nut in her mouth for two hours she would be cured. While giving this plan of treatment a trial, the nut slipped down her throat and lodged in the cervical portion of the œsophagus. During the twenty-four hours following her admission every attempt to dislodge it failed. On the 15th, the patient was very low and distressed, and it was decided after consultation with his colleagues to perform œsophagotomy. The operation was carried out in the usual way, by dissection through the loose cellular tissue between the carotid vessels and the trachea, till the foreign body was felt through the walls of the œsophagus, which was opened by a longitudinal incision, and the nut removed. The woman was fed through a tube for five days, swallowing was perfectly restored in twelve days, and she was discharged cured in three weeks.—*Lancet*, March 8, 1884.

Vesical Calculus Having a Sequestrum of the Pubic Bone for a Nucleus.—Dr. E. Vincent, of Lyons, reports the case of a man, æt. 35 years, who had suppurating sores on all his limbs from justa-epiphyseal osteitis; some of the joints were ankylosed. He had a vesico-femoral fistula, and was greatly troubled with urinary difficulties. All the urine did not pass through the fistula, but the greater part escaped through the juxta-trochanteric fistula. On introducing a sound into the bladder, it stopped at a rough surface in the prostatic region; this, on further examination, was found to be the denuded pubic bone. When the instrument was passed into the bladder, a very large calculus was recognized. The diagnosis was vesical calculus, due to a fragment of the pubic bone, which had fallen into the bladder. The process seemed to have been as follows: there had been an osteitis of the left pubic bone, which terminated by necrosis; an abscess formed, which opened simultaneously into the bladder and through the thigh. When the sequestrum separated it fell into the bladder.

The lateral operation was performed with the galvano-cautery, the calculus removed, and the diagnosis confirmed. The patient recovered.

Vincent also reports a case in which he removed a thermometer from the bladder.—*Ann. des Mal. Génito-Urin.*, March 1, 1884.

Extirpation of the Larynx in an Old Man.—Dr. H. Leisrink reports the case of a man, æt. 72 years, whose parents had died at the age of ninety-five years. The patient had never been sick until two years ago, when he noticed a slight hoarseness. In about a year complete aphonia came on. Afterwards there was impossibility of swallowing anything fluid, and then four days before he was seen attacks of dyspnœa commenced. This was so distressing that he applied for relief. The heart, lungs, and kidneys were found to be sound. Carcinoma of the larynx was diagnosticated, and tracheotomy was performed preliminary to excision of the larynx. Five days afterwards the larynx was removed by Gussenbauer's method. The epiglottis was left, as it was not involved. The mucous membrane of the pharynx was adherent to the posterior surface of the larynx. The Michael tampon-canula, which had been placed in the trachea, answered excellently. The wound

was dressed with sublimate gauze and granulated well. The temperature did not rise above the normal. For several days food was administered through the œsophageal tube, and then through a No. 18 elastic catheter. Up to the fifth day only fluid food was administered. The patient left his bed on the fifth day after the operation, and three months afterward was completely well, but he died in the fifth month of croupous pneumonia.

Although the age of the patient contraindicated an extensive operation, it was thought that the extension of the carcinomatous process to the neighboring glands would soon cause so large a growth that nutrition would be impossible.—*Berl. klin. Wochens.*, February 4, 1884.

SPHACELUS OF THE BLADDER IN DIABETES.—M. TRONCHET, of Bordeaux, reports (*Journ. de Méd. de Bordeaux*, No. 23, 1883) the case of a man æt. 75 years, who, for some time, had had attacks of painful urination and intermittent nocturnal incontinence; the urine was abundant, clear, and without albumen, but contained sugar in large quantity. Being taken with an attack of complete retention, he was catheterized several times with difficulty, on account of stricture; a catheter was then left in place. The patient died in six days, after a progressive diminution of urine, which had become muco-purulent.

At the autopsy it was found that, beside the stricture and hypertrophy of the prostate, the bladder was in a gangrenous condition. It was very prominent above the pubis, presenting, exteriorly, a deep-violet color. Its tissue was extremely friable, and its internal surface covered with a pultaceous mass, the whole somewhat resembling pulmonary gangrene.—*Ann. des Mal. Genito-Urin.*, March, 1884.

NEPHROTOMY.—This operation was performed on February 27, at the Western Infirmary, Glasgow, by DR. PATERSON. The patient was a young woman, æt. 28 years, who had suffered for some years from symptoms of renal calculus. On cutting down to the left kidney some ounces of pus were evacuated, and a stone, weighing one drachm, was removed from the interior of the organ. At last accounts the result of the operation was all that could be desired.—*British Med. Journal*, March 18, 1884.

EXTIRPATION OF AN INTRAUTERINE MYOMA BY MEANS OF THE GALVANOCAUSTIC LOOP.—DR. E. F. FABBRI, of the University of Modena, reports the case of a woman, about thirty-four years old, upon whom he operated. Various means having been used to control the loss of blood and the pains, a thorough physical examination having shown that the growth, which was very large, could be extirpated, though only with considerable difficulty, it was determined to operate. The chief difficulties in the way of operation were the size of the tumor and the fact that the vagina was small, the woman having had no child.

It was not thought best to operate just after menstruation, as the tumor was larger at this time. Fabbri determined, therefore, to operate between the periods of menstruation. In order to obtain dilatation of the external orifice, he provoked uterine contractions by the aid of an elastic vaginal tampon, such as is used in premature artificial delivery. After having dilated the os and drawn the tumor down, the galvanocautery was introduced, the loop being double the long diameter of the tumor, The loop was pushed up to the base of the tumor by means of what Fabbri calls a forked spatula. After considerable difficulty the loop was adjusted and the rheophores were turned on. The loop was drawn slowly, so as to thoroughly cauterize the surfaces. In four minutes the tumor was removed from its attachment, and, after considerable difficulty, from the uterus. The patient recovered easily. The tumor was about the size of a duck egg, and covered with very adherent mucous membrane, except over the anterior two-thirds of its upper extremity, where there was a zone of fibro-muscular tissue.

Fabbri advises the following for exploring the uterus when it contains a large tumor: He does not think well of the Sims's sound, as it is too flexible, and is easily bent by an obstruction, so that the operator is deceived. Instead of this he uses a sound of white metal, the uterine extremity of which has the shape of a finger, but is more flat, has a diameter of two-fifths of an inch, and is slightly olivary. Its shaft is slightly flattened and curved on the flat, but is easily placed in any desired curve. At the close of his paper he draws the following conclusions:

1. Intrauterine myomata of intermittent appearance are probably always free throughout their whole length, and attached near the fundus uteri.

2. In order to explore the uterus which contains a tumor, one should use a sound the extremity of which is somewhat spoon-shaped.

3. For extirpating intermittent myomata, if one operates between the menstrual periods, the os should be dilated, and uterine contractions brought on by means of the elastic tampon, and, if necessary, by introducing an elastic bougie into the uterus.

4. The galvanocautery is preferable to all other methods for removing these growths.

5. Simple carbolic injections are not sufficient for antisepsis; carbolated compresses should be applied to the vulva.—*Annales de Gynéc.*, February, 1884.

GALVANOPUNCTURE IN ANEURISM OF THE AORTA.—DR. FRANCESCO BRANCACCIO reports the case of a man, æt. 64 years, of intemperate habits, who complained of pain in the left anterior part of the chest, over the base of the heart, which radiated to the shoulders. The pain came on suddenly after a muscular effort, and was intermittent. Examination revealed a tumor, limited above by the upper border of the second rib, on the right by the sternum, on the left by the mammary line, and below was continuous with the heart. The diagnosis of aneurism of the ascending portion of the aorta having been made, it was determined to practise galvanopuncture. A fifteen cell Daniell's battery was used, two needles being carried into the sac through the third interspace to a depth of one inch and one-fifth, and an inch and a half apart. The first seance lasted sixteen minutes. In the afternoon the patient felt better, the tumor was smaller, the pulse, which had fallen from 118 to 90, was stronger, and the respirations were less frequent. Twenty days afterward the battery was again used, with twenty elements, for fourteen minutes. Altogether is was used four times, and the patient was completely cured.—*Revista Internaz. di Med. e Chir.*, February, 1884.

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THE DISINFECTION OF THE SPUTUM OF TUBERCULOSIS.

AMONG many other valuable papers to be found in the second volume of the reports of the Imperial Board of Health of Germany just issued, under the editorship of Dr. Struck, is one by DRS. SCHULL and FISCHER upon the disinfection of the expectoration of phthisical patients. These experimenters treated the dried and moist expectoration by various germicides, with a view of determining those which would be at once most efficient and available in practice.

They ascertained, in the first place, that dried sputum, from 95 to 126 days old, was in all instances capable of producing tuberculosis in guinea-pigs inoculated with it. From this age its activity progressively diminished. Thus, of 3 guinea-pigs inoculated with sputum 143 days old, which was active at 95 days, 2 were infected. Of 3 pigs inoculated with the same sputum 186 days old, only 1 was infected, and of 3 inoculated with the same sputum 226 days old, none was infected. This activity they ascribed to the spores of the bacillus, since it has been experimentally shown, also, that the bacilli themselves are not to be found in sputum of this age.

We have not space to note the methods employed in treating sputum by the various substances and measures used, but pass directly to the results. Control-experiments were made in every instance with non-disinfected sputum, which was invariably found capable of producing tuberculosis.

1. Experiments with dried sputum. Almost all the methods used to disinfect dried sputum were successful. They included treatment of sputum from 98 to 143 days old, heated to from 212° F. to 266° F., sputum boiled for 5 minutes, and sputum treated for from 20 to 24 hours with corrosive sublimate 1 in 5000 and 1 in 2500; carbolic acid 1 in 190; liquor ammonia 16 in 100; caustic soda 1 in 100; iodide of potassium 5 in 100; iodoform vapor, iodoform, iodine, and iodine vapor.

Steam, solution of arsenious acid, and dry iodoform vapor were alone unsuccessful.

2. The disinfection of fresh, undried sputum was not nearly so successful. The details of the experiments would occupy too much space, but of a large number of substances used in various degrees of concentration, including absolute alcohol, creasote water, the vapor of paper saturated with creasote, thymol in alcohol, arsenious acid, naphthalin water and vapor, solutions of iodide of potassium, bromide of potassium, bromine, iodine, iodoform, salicylic acid, carbolic acid, vapor of filtering paper saturated with oil of turpentine, acetic acid, spirit of hartshorn, chloride of sodium, aniline water, vapor of filtering paper saturated with aniline oil, caustic soda, and caustic potash, all failed to disinfect the sputa. Only the twenty hours' action of absolute alcohol, twenty-four hours' treatment with a saturated solution of salicylic acid, three per cent. solution of carbolic acid, acetic acid, caustic ammonia, saturated solution of aniline, and vapor of aniline oil, all acting through twenty hours, were effectual in destroying the activity of the sputum. The *two hours'* action of a five per cent. solution of carbolic acid, of a saturated solution of aniline, and of spirit of hartshorn did not destroy the infectious properties of the sputum.

Of the measures and substances which had appeared efficient in destroying the virulence of dried sputum, further experiments were made only with those which seemed available in practice, that is, dry and moist heat, corrosive sublimate, absolute alcohol, carbolic acid, and saturated aniline water. With dry heat, a specimen rich in spores, which five days previously had been allowed to dry upon a glass plate, was scraped off and a quantity, equal in bulk to a small bean, was enclosed in a capsule made of filter-paper, and further in a piece of linen three layers in thickness, and placed near the bulb of the thermometer in a drying-chest in which the temperature had been raised to 212° F., the object being to imitate the conditions under which clothing and other materials soiled with sputum would be disinfected. After an exposure of 15, 30, and 60 minutes respectively, the sputum was rubbed up with sterilized water in sterilized glass dishes, and injected with sterilized syringes into the abdominal cavity of guinea-pigs, controlled by experiments with non-disinfected sputum. The result proved that such exposure for an hour was insufficient to

disinfect the sputum with certainty, although more efficient than exposure for 30 minutes. Whence it was inferred that several hours' exposure would be effective.

It has been seen that an exposure of dried sputum to steam at 212° F. for 15 minutes, was not sufficient to sterilize it, but from 30 to 60 minutes was. So too fresh undried sputum after an exposure of 15 minutes to steam at 212° F., was rendered harmless. Similar results followed the boiling of sputum which control-experiments showed to be virulent.

The action of corrosive sublimate solutions upon the fresh, moist sputum was disappointing, and somewhat different from what might have been expected from recent experience. In the first place, solutions of 1 to 5000 of water, which seemed quite efficient in destroying the infecting powers of dried sputum, when added in the proportion of two parts to one of the sputum, making, therefore, a strength of 1 to 7500, were without effect. Then sputum treated with sublimate solutions 1 to 500, when injected into the abdominal cavity, caused death by poisoning. Finally, solutions of the strength of 1 to 1000 failed also to disinfect the sputum. Whence the experimenters concluded that corrosive sublimate is not adapted for disinfection of fresh sputum. In atttempting to account for the difference between these results and that of corrrosive sublimate upon dried sputum, they suggest that this had already lost some of its virulence before being treated, or that the corrosive sublimate being brought into contact with smaller particles of sputum, reached the spores more effectually, while in the case of the fresh sputum its contact produced a superficial coagulation which interfered with any germicidal action.

Further experiments with absolute alcohol showed that it could only be relied upon when used in the proportion of five times that of the sputum treated. So that it, too, is not practically available.

Carbolic acid, on the other hand, proved quite efficient, a 5 per cent. and 10 per cent. solution serving to disinfect an equal bulk of fresh sputum, although a 2½ per cent. solution was inefficient.

Saturated solutions of aniline water, containing 3.2 per cent. of aniline, served to disinfect sputum, when added in the proportion of ten times the quantity of sputum. While answering the purpose, therefore, it cannot be considered as suitable as carbolic acid, because it is at once more costly, and is further characterized by an odor even more unpleasant, while it is also more or less poisonous. *So that the best disinfectant for spit-cups used by phthisical patients would seem to be carbolic acid, with suitable solutions of which these utensils may be partially filled.*

So, too, the ordinary scalding and boiling to which the clothing of patients and others is subjected, is sufficient to destroy the virulence of tubercle bacilli; and as carbolic acid in the spit-cup will kill the bacilli expectorated into it, there should be no danger, if these simple precautions are taken, of disseminating phthisis through the sputum.

RUPTURE OF THE POPLITEAL VESSELS IN FORCIBLE EXTENSION OF ANKYLOSED KNEES.

THE treatment of fibrous angular ankylosis of the knee by forcible and sudden manual extension is liable to be attended with certain mishaps, of which the most common are separation of the condyles of the femur and the upper epiphysis of the tibia, and tearing of the skin of the popliteal space. Another risk, to which little attention has been directed in our text-books, is gangrene of the limb, from laceration or compression of the popliteal artery, but the accident is so rare that it was met with only four times out of five hundred and eighty cases in the hands of Bardeleben, Bauer, Busch, Hofmokl, B. Langenbeck, M. Langenbeck, Louvrier, and Nussbaum.

To these risks DR. SALZER, of Vienna, adds five examples of rupture of the popliteal vessels, the details of which may be found in the *Wiener Medizinische Wochenschrift*, Nos. 8 and 9, 1884, and of which three were under the charge of Billroth, and one each under the care of Gussenbauer and Nicoladoni. In all, the disease was of long standing. In three, the artery was completely ruptured, and in two, the lesion was incomplete and lateral. In four, the vein was also lacerated, and in three, the integuments were torn. Gangrene ensued in three cases soon after the procedure, and necessitated amputation through the thigh, of which one proved fatal from septicæmia. In the fourth case, gangrene set in after ligation of the ruptured artery and vein, and the patient succumbed from septicæmia after disarticulation at the hip-joint. In the fifth case, immediate amputation was followed by recovery.

With one exception, the vessels were surrounded by indurated tissues and were adherent to the posterior ligament of the knee-joint, which, as would naturally be expected in cases of chronic ankylosis, had undergone adapted shortening or contraction. Hence, when the ligament gave way under the forcible manipulations, the artery and vein necessarily met with the same fate. In such cases it would be far more wise not to resort to force, but to endeavor to correct the deformity by gradual and well-directed efforts at extension at several sittings. Should the limb grow pale and the temperature become lowered, there would be ground to suspect adhesion of the vessels to the posterior capsule of

the joint, when further manipulations should be temporarily abandoned.

THE AMERICAN MEDICAL ASSOCIATION.

The thirty-fifth annual meeting of the American Medical Association will soon be held, and our thoughts naturally turn to the results which have been achieved by the Association. While we recognize that much good has been the outcome of these annual gatherings of the profession, we feel that still more can be attained, and that it becomes the duty of the wise men who influence the action of the Association, calmly to consider how its utility can be enhanced, and what means can be employed to strengthen our great national organization. To attain its greatest scope of usefulness it must have the hearty sympathy and faithful coöperation of the whole profession; it must bind to it, not alienate from it, the workers in the ranks.

It is a matter of notoriety that there has been much dissatisfaction of late, with the results of the work of the Committee on Nominations, especially in regard to the selection of officers of Sections. We know that this Committee has a great deal to do; its members have to sacrifice, in large measure, not only attendance upon the general, but also upon the sectional meetings. Beside, they are solicited by this aspirant or that, or by friends of the self-proposed candidate, to give him a prominent office. Some of the scenes of solicitation, personal and persistent, that transpire at each meeting of the Association, make one blush for the modesty and humility of the medical profession. We are therefore inclined to be very charitable to the forty gentlemen to whom their respective State delegations have assigned the important duty of selecting officers for the Association and its Sections, yet we have not enough charity to say that their duty is uniformly, or even usually, well done.

The Nominating Committee is a large, unwieldy organization. From the number of offices to be filled, and because of the number of aspirants for office, an opportunity is given for combinations, for bargains, for that which is known among politicians as "log-rolling"—an opportunity which, judging by results, is rarely neglected. At the same time, the fact of the Committee being so large reduces to a minimum the responsibility of each member; and the saying of a well-known author, in commenting upon Solomon's adage,—"In a multitude of counsellors there is safety—yes, safety for the counsellors, but not for the counselled,"—is verified. Let one scrutinize, for example, the list of the officers of Sections for the last few years, and while he will find the names of some who are recognized authorities in their special departments, he will find the names of others who hold no such position, and of late the names of some who, it is alleged, have not even been, uniformly, upholders of the Code of Ethics of the Association, and of others, again, who are utterly unknown, either for good or evil, for learning or ignorance. Now, such appointments are disheartening to those upon whom the Association is compelled to rely for its scientific and practical work, and they weaken the general professional respect in which the Association is held.

Is there no remedy for this great evil? Would not the results be better if the work of the general Nominating Committee were confined to nominating the general officers, and if each Section were allowed to nominate its own officers? The members of a Section, it may be safely assumed, know better who are the representative men in their own special department, and who would be the most suitable and acceptable officers to guide their own deliberations, than a general Nominating Committee of forty or more members selected from the Association at large. Moreover, this plan commends itself to favorable consideration because it would do away with the probability—almost with the possibility—of making combinations and of log-rolling.

There can be no doubt that the unsatisfactory manner in which the Sections have been officered has been a large factor in promoting the growth of the numerous "American" special societies, which, of late, have grown up, and which, with the contemplated Society of Internal Medicine, cover the field of every one of the Sections. There seems to be no better way of discouraging the growth of these special societies, and of recalling their members into the general fold, than by giving to each Section of the Association the power of controlling its own organization, subject to the general laws of the parent body.

While, of course, a change from the present unsatisfactory way of making nominations cannot be made this year, yet we hope that steps to this end will be taken, and that it will be accomplished at the meeting to be held next year.

MARRIAGE AND MITRAL STENOSIS.

In a recent clinical lecture at *la Charité*, Dr. Landouzy stated that the mitral orifice is anatomically narrower in women. On the other hand, the hyperalkalinity of their blood leads to sclerosis. These conditions explain the frequency of mitral stenosis in women. Nevertheless, as long as the left auricle, says the *Journal de Médècine*, remains in good condition, the primary lesion makes but little progress; but when the great, vital test of pregnancy comes, there is danger.

Porak's statistics show that in gravido-cardiac disorders, as they are called, more than two-thirds of the cases are those of mitral stenosis, mitral insufficiency, or the two combined. Obstetricians are agreed in advising that a woman suffering with mitral disease, especially mitral stenosis, should not marry; or, being married, she should not have a child; or, having given birth, she should not nurse. A woman with mitral disease having been married, and becoming a widow without having borne a child, is in a most favorable condition if she remains content with widowhood. So, too, religious celibates who preserve their continence may have mitral stenosis, and live to the age of grandmothers.

Landouzy mentions the case of a young girl, who had been in the hospital under his care, and whom he had advised not to marry, but who disregarded his advice, married, became pregnant, and, after a miscarriage, died suddenly in an attack of asystole.

Of course, in cardiac disease, it is well to discourage marriage, but, in regard to such action, the old fable of Cupid being blind has countless illustrations, and at the bridal altar these very maidens, like other brides, deck themselves with orange flowers, the very symbol of fecundity—whether they know this or not—when they ought not to have a single pregnancy. But, when married, they are advised not to have children. How many women can control this matter? To avoid reproduction is very easy to advise, very difficult to do. Possibly it might be well to counsel these cardiopathics to prepare for marriage by first undergoing Battey's operation. But when the wife is not sterilized in advance, a similar proposition might be made to the husband, and in the day when our gentle sisters become professors of diseases of the male sexual organs, possibly normal orchidectomy may occupy as important a place in the surgical therapeutics of diseases of men as normal ovariotomy now does in diseases of women.

However, we are not sanguine that either plan of treatment for the prevention of pregnancy will be adopted; but we are inclined to think that germicide solutions may continue to be in demand by cardiopathic wives.

TRAUMATIC ANEURISM OF THE VERTEBRAL ARTERY.

IN the *Archives of Medicine*, for April, 1884, may be found the report of a case of traumatic aneurism of the right vertebral artery high up in the neck, which is interesting, not only on account of the rarity of the lesion, but from the fact that DR. R. F. WEIR succeeded in effecting a cure by digital compression over the lower and anterior edge of the sac, in seven hours.

Dr. Weir tabulates eight similar cases, in which the error was committed of ligating the carotid artery. All proved fatal. He also refers to the case of Möbres, cured by the application of cold after pressure on the exposed external carotid had produced no effect on the tumor, and to that of Kocher, cured by graduated compresses of carbolized gauze acting on a pledget of splint, dipped in perchloride of iron, and crowded into the space between the transverse processes of the fifth and sixth cervical vertebræ. Hence, in the two cases in which the diagnosis was made, digital compression and direct compression have proved successful.

The great difficulty is in arriving at a correct diagnosis, which, Dr. Weir says, may be done by "carefully considering the effect of pressure on the carotid, not only above, but also on a line with the transverse process of the sixth cervical vertebra, or rather over the anterior or so-called carotid tubercle. Compression above this point affects, as a rule, the carotid artery only; over and below the transverse process compression will not only occlude the carotid but also the vertebral artery, which runs to its outer side. It must be remembered, however, that the vertebral, instead of entering the foramen in the transverse process of the sixth cervical vertebra, in its upward course sometimes remains exposed until it enters a higher foramen. To meet such possibilities, it has been suggested to isolate the carotid according to Rouge's plan, which is, with the sterno-mastoid relaxed, to grasp the muscle with the finger and thumb and to pinch the carotid between them. It is necessary also to keep in mind, in trying to effect vertebral compression, that the carotid tubercle is, according to Chassaignac, always from two to three inches above the clavicle. A traumatic aneurism whose pulsations are unaffected by compression of the carotid applied as above detailed, will be found to concern the vertebral artery."

In the treatment, ice and compression by bandages or the fingers having failed, the sac should be opened, the finger applied to the wounded artery until the clots are cleared away, and firm antiseptic plugging be resorted to, as was successfully done by Kocher in a case of aneurism, and by Kuester in two examples of wound of the artery.

OSMIC ACID IN NEURALGIA.

THE hypodermatic injection of from eight to fifteen drops of a one per cent. solution of osmic acid in peripheral neuralgia does not, upon further experience, fulfil the expectations which the first trials of Neuber led us to anticipate. Of 29 cases recorded by EULENBERG, in the *Berliner klinische Wochenschrift*, No. 7, 1884, there were only 7 cures, if

freedom from recurrence for periods varying from two to fourteen weeks be taken as the criterion of perfect recoveries. That the remedy does, however, exert a certain beneficial effect is shown by the fact that the pain disappeared without the employment of other remedial agents. Hence, it may be used, before resorting to anodynes, in examples of recent and uncomplicated forms of the affection, with some hope of success.

REVIEWS.

HINTS ON THE DRAINAGE AND SEWERAGE OF DWELLINGS. By WILLIAM PAUL GERHARD, Civil Engineer. 12mo. pp. 302, with 282 illustrations. New York: William T. Comstock, 1884.

SOME years ago the author of this volume published in the fourth annual report of the State Board of Health of Rhode Island, a very satisfactory paper on "House Drainage and Sanitary Plumbing," which has since been used as the basis of a little manual on the same subject. The present work is an amplification of that paper, and is a highly creditable production. It is a *résumé* of the latest and most authentic information on the drainage and sewerage of dwellings, written in a plain and intelligent manner, and abounds in illustrations, which are indispensable in a work of this character.

The book opens with a statement of the general principles involved in house sanitation. The first chapters are devoted to an exposition of the common defects in the drainage and sewerage of buildings. In the remaining chapters, the principal features of a properly devised and well-constructed system of house drainage are plainly pointed out. This branch of the subject is discussed under the following headings: Drainage of Dwellings, Internal Sewerage of Dwellings, Description of Plumbing Fixtures, General Arrangements and Care of Fixtures, and External Sewerage and Disposal of Household Wastes.

The author properly condemns the covering of the top of the soil-pipe with a return-bend or ventilating cap, as a mistaken practice. The great importance of ventilating soil-pipes, traps, etc., is insisted upon, and the proper methods described. The description of traps is complete, but is rather wearisome by its length. It is hardly necessary to describe the numerous devices of this kind. A few of the best designs, illustrative of the objects to be secured, would have answered the purpose, without needless repetition of details. Privy-vaults and cesspools are rightly condemned as abominations which should never be tolerated where the water-carriage system is available. The author gives his preference to closets without any movable machinery, that is, the hopper closet and the wash-out closet. He insists that all plumbing fixtures should be, as far as possible, in plain sight. The open arrangement of the fixtures throughout the building is advantageous for cleanliness, and for ready inspection and ease in detecting faults, and in making repairs. He does not deem it essential to health that all these modern conveniences, if they are properly designed and well executed, should be banished from the main portion of the building.

The book is a faithful representation of the principles and practices advocated by the best authorities in the country, and will serve as a valuable guide to architects, engineers, physicians, and sanitarians, and especially to householders, whose duty and interest it is to have intimate knowledge of all matters pertaining to the drainage and sewerage of the dwelling.

The omission of an index is a most serious fault in any book, but it is especially embarrassing in one made up largely of details. The full table of contents cannot compensate for this error. The work of the publisher is fairly well done.

THE MEDICAL DIRECTORY OF PHILADELPHIA FOR 1884. Edited by SAMUEL B. HOPPIN, M.D. 12mo. pp. 205. Philadelphia: P. Blakiston, Son & Co., 1884.

THIS conveniently arranged volume forms an excellent and accurate local medical directory. The collateral information, however, is rather meagre. The editor would have increased the usefulness of the book if he had given fuller information concerning the organization of, and rules governing admissions to, the hospitals, dispensaries, and other charitable institutions; and the value of the volume would have been also enhanced, without greatly increasing its bulk, by extending the directory to the whole State, as well as to the adjacent towns in New Jersey and Delaware.

SOCIETY PROCEEDINGS.

PHILADELPHIA NEUROLOGICAL SOCIETY.

Stated Meeting, February 25, 1884.

THE VICE-PRESIDENT, CHARLES K. MILLS, M.D., IN THE CHAIR.

DR. MILLS read a paper on

THE MCGINNIS CASE,

in which he summarized the facts indicating the insanity of McGinnis as follows: A bad family history; evidences of the monomaniacal character, as shown by a study of his life and present condition; the existence of a delusional state, and even of special delusions of a depressive and persecutory type; the presence of hallucinations of hearing and sight, the former being connected largely with persecutive ideas; some manifestations of religious monomania; a history of alcoholism, and the fact that his chief delusion (marital infidelity) was one often found in chronic alcoholic insanity.

DR. LAMBERT OTT then reported a

CASE OF UNILATERAL SPASM, HEMIPLEGIA, AND APHASIA, FOLLOWING MEASLES IN A CHILD.

Boy, aged twenty-eight months, healthy and intelligent, talked well for one of his age. April 2d, he had a mild attack of mumps, and seven days later a well-defined but mild attack of measles. On the tenth day, he was well and laughing and playing in bed, but instead of the dull yellowish stains which remain after the papules of measles have faded, his skin was dotted with spots of a purplish hue. The same morning his mother

noticed a twitching of the muscles of the right eye and right side of face, and soon after similar movements of the right arm and leg. He remained conscious during the spasm, but was unable to speak. In an hour, the leg ceased to move, and was paralyzed. Half an hour later the arm-jerk stopped, and the limb lay powerless; the face movements continued only a few minutes longer, when the side of face was observed to be paralyzed. While the right-sided convulsive seizure was going on, the left arm and leg were affected with choreic movements, which subsided soon after right-sided paralysis was manifest.

Two hours after the first appearance of the spasm, the following condition was noted: Ptosis of right eye; no change in pupils, and no disturbance in movements of eyeballs. When he cried the right side of the forehead remained smooth, while the left was markedly corrugated; no paralysis of tongue, but complete aphasia. Motion in the right arm and leg completely paralyzed, sensation partially. He was conscious and drank water with very little difficulty. The left side of the body showed no disturbance of sensation or motion, except occasional choreic twitching. The dread the child had of strangers prevented an examination of the heart. Temperature 101°; pulse 120; respiration 20, and very irregular. Some bronchial catarrh.

Second day, temp. 102°, pulse 130, resp. 40; no vomiting; intelligence remained good; tongue dry; passed water and feces involuntarily. During the next six days his fever remained high, cough increased, and evidences of catarrhal pneumonia developed.

About the ninth day attention was called to a bulging of the right side of the chest, resembling the deformity produced by a large pleuritic effusion, with a marked lateral curvature of the spine, the convexity being toward the right side. Percussion of the lung of this side elicited hyper-resonance, and auscultation, normal breathing with prolonged expiration. The chest deformity was apparently due to contraction of the muscles of the left side. He had conjunctivitis of right eye and dribbling of saliva from the right angle of the mouth. Was very irritable, and often carried his hand to his head and moaned. Urine normal. The choreic movements of left side returned, but were not so marked.

In the second week the muscles of the face began to regain power. In the third week there was no marked change, except a peculiar swelling and tenseness of the paralyzed leg, which persisted four days and suddenly disappeared during one night; the next morning the leg was very flabby. Electro-muscular contractility was fair. In the latter part of the third week his head was drawn to the paralyzed side, the chin pointing to the left, showing the peculiar influence of the healthy sterno-mastoid and other neck muscles. The muscles of the right side of the neck were flabby; those of the left side were hard and tense. Lifting the head would place it erect, but when unsupported, would fall into its former position. In the fourth week movements were noticed in the arm, and in the fifth week the leg began to regain power. He was now, for the first time, using a few monosyllables, as *ma*, *pa*, etc. In the fourth month he walked fairly; used a few more simple words. In the sixth month, his general health was good, and he was talking more. His gait was fair, but he was unable to run. There existed a marked weakness of the flexor and extensor muscles of the anterior part of the right leg and of the extensor muscles of the right arm.

Dr. Ott regarded the case as one of embolism of the left middle cerebral artery, obstructing the first branch, called the frontal-external and inferior, which supplies the third frontal convolution; also the second and third branches, called respectively the anterior parietal of Duret, or the artery of the ascending frontal convolution of Charcot, and the posterior parietal artery, or the artery of the ascending parietal convolution of Charcot. These latter two branches supply the motor centres of the extremities (Ferrier). The fourth branch, which supplies the angular gyrus, was probably not obstructed, as vision remained apparently unimpaired. The motor centre of the facial muscles occupies a region in close proximity to that of the extremities, which is also supplied by branches of the middle cerebral artery.

The marked peculiarities in the case are as follows:

1. The age of the patient. 2. No loss of consciousness, which Hamilton says is the exception. 3. The disturbance of conformity of the chest, on the ninth day after the spasm. 4. The falling of the head to the paralyzed side twenty days after the spasm. Whenever he had a good night's rest, he was able to hold his head erect for two hours; after that time it lay to one side.

The order of recovery of the paralyzed parts was the reverse of the attack, and was as follows: the face, neck, and chest showed the first signs simultaneously, then the upper extremity, and next the lower extremity. When considerable power had been regained, quite noticeable yet was the weakness of the extensor muscles of the forearm, which gave the hand the peculiar position that resembles the wrist-drop of lead palsy.

Most interesting of all was the occurrence of aphasia. Here was an active little boy, who was suddenly stricken with unilateral spasm, followed by hemiplegia and a total loss of the power of speech. His intelligence did not wane one whit during the whole trouble, but it seemed as if he had to learn to talk over again. At no time did he misapply a word—as calling a chair a table. When once he knew a word and its application he always used it afterward. At this date (nine months after the attack) his speech is disconnected. If he desires to express a thought, he can make a good beginning, but is unable to finish. For instance, he wants to use the sentence, "Katie, get my hat in the other room!" he can only say, "Katie, get my hat ——," for the rest of the sentence he uses signs. His being unable to finish the sentence is not that he does not know the word "room," for, when used otherwise, he has no trouble in recalling it. When he uses three or four words in succession, his speech powers seem at an end.

DR. FRANCIS DERCUM said that he was inclined to regard the case as more likely to be one of hemorrhage than of embolism. It is well known that the miliary aneurisms described by Charcot and others occur sometimes in the very young; therefore, one of the conditions which lead to hemorrhage may be present in infancy. The absence of valvular disease of the heart was also against the idea of embolism. He thought that the symptoms presented by the case indicated a lesion of the internal capsule and basal ganglia, rather than of the convolutions. He referred to the more frequent

occurrence of hemorrhage in this region, and also to the wide extent of cortex that would have been required to be involved in order to explain the phenomena.

Dr. Mills agreed with Dr. Dercum that, from the history of the case, the absence of recognized heart lesions, and the age of the patient, the case was probably one of hemorrhage. He believed, however, that some of the facts indicated a cortical lesion. One of these was the existence of choreic movements on the side opposite that which was paralyzed. According to Duret, when irritative lesions of the cortex occur, they produce not only spasm on the opposite side of the body, but also may cause contraction or spasm on the same side, the result being brought about through irritation of the sensory nerves of the dura mater, which irritation is conveyed to the bulbo-medullary centres.

Dr. Mills referred to the completeness of the paralysis, as a matter of great interest in connection with the views of Broadbent as to the communication by commissural channels of those parts of the central nervous system which preside over movements of the two sides of the body which are associated.

Dr. Dercum said that the occurrence of choreic movement on the side of the lesion could be as well explained by the transmission of irritation by the commissural channels of the brain, as by the views of Duret.

Dr. Ott closed the discussion, and said that in favor of the embolism view was the sudden appearance of the attack, and the symptoms which usually follow an embolus in the left middle cerebral artery. In favor of the view of cerebral hemorrhage was the disorganized condition of the blood, the result of measles, predisposing to such an occurrence.

Dr. Charles K. Mills then read a

NOTE ON THE USE OF NERVE PRESSURE FOR THE RELIEF OF HYSTERICAL CONTRACTURE.

In three cases he had resorted to strong presssure, applied, by means of the thumb or fingers, to the trunk of the nerve supplying the muscles affected by the spasm in contracture; in a case of hysterical spasmodic torticollis, and in one of hysterical contracture of the wrist and hand, the condition passed away, and remained relieved; in a case of long-standing contracture at the knees, under the effects of pressure on the sciatics the spasm disappeared, but recurred. The procedure was simple, and had value, both as a means of diagnosis and treatment. Whether the result was produced by mental effect, by causing a temporary paresis, or by the pain, he was not prepared to say.

Dr. Wharton Sinkler spoke of having used the method unsuccessfully in a case of facial spasm, which was not, however, hysterical in character.

Stated Meeting, March 24, 1884.

The President, S. Weir Mitchell, M.D., in the Chair.

Dr. Mitchell, on taking the Chair, made some introductory remarks on

THE OBJECTS AND DUTIES OF A NEUROLOGICAL SOCIETY.

Dr. Sinkler presented a patient suffering from

SPINAL ACCESSORY SPASM.

Anna B. K., aged forty-one, single. Has never enjoyed very good health, but has had no special illness. She has had neuralgic headaches for several years, and about three years ago had rheumatism in the left shoulder. In the spring of 1882 she noticed that, while sitting sewing, her head would turn toward the right shoulder. She could control the movement at first, if she directed her attention to it, but it soon began to be worse, and less under the influence of the will. In June or July, 1882, she became unable to restrain the movements. There was no pain in the neck or head, but she became nervous and irritable. There was a sense of discomfort on the top of her head. The use of her eyes seemed to make the movements more troublesome. Her general health has been fairly good, the appetite poor, and she has worried greatly. She was under Dr. Sinkler's care, at the Infirmary for Nervous Diseases, for several weeks in the spring of 1883, and various remedies were used. Galvanism and static electricity were faithfully applied, as well as massage. Hypodermics of atropia were given in the muscle affected, and the bromides and gelsemium were administered. There was no benefit apparent from the treatment.

She was readmitted a few days ago, and her present condition is as follows: She usually sits resting the right side of the face against her hand, to check the movements. The head is rotated to the right every few seconds, and turns more frequently if she is excited or nervous. The chin is turned strongly to the right, and the head is inclined slightly in the same direction. The head is not drawn back. After being held in this position for about two seconds, the spasm relaxes and the head becomes straight. She can keep the head quiet by resting it against some object, and sometimes will rest her head against the wall for this purpose. The left sterno-cleido-mastoid muscle is markedly hypertrophied, and is tender to handle. Pressure over the spinal accessory nerve does not arrest the spasm; it rather brings it on. There is pain at the insertion of the right sterno-mastoid muscle, but none in the left muscle. No contraction takes place in the trapezius muscle, and it is not hypertrophied. The voice is unchanged and there is no laryngeal spasm. The urine contains neither albumen nor sugar. The optic disks are nearly or quite normal. Vision R. $\frac{20}{XXX}$ to $\frac{20}{XL}$. She is nervous and inclined to be hysterical.

Dr. Dercum mentioned a case which was relieved by nitrite of amyl. He said, however, that the case was specific in nature. Iodide of potassium was afterwards given, with satisfactory results.

Dr. Mitchell believed that gelsemium, in exceedingly large doses, was the best remedy for such cases.

Dr. A. J. Parker made some remarks on

THE PRIMITIVE FISSURES OF THE FŒTAL BRAIN.

These fissures appear very early in fœtal life. He did not believe, with some, that they were due to hardening agents, as alcohol and chloride of zinc. He found that these fissures had certain mathematical relations to the brain itself. He regarded them as due to pressure, just as brain flexure is due to pressure. The brain grows under pressure; it tends to grow more rapidly than the skull. Fissures represent retarded growth.

THE PRESIDENT invited DR. GUY HINSDALE to exhibit some mounted specimens showing

THE LESIONS OF SNAKE VENOM.

The specimens were obtained in the experimental laboratory of Drs. Mitchell and Reichert, in the University of Pennsylvania, and illustrated the ecchymoses seen in the lungs of rabbits into whose jugular veins venom had been injected. The appearances are striking, the blotches of extravasation being in marked contrast with the surrounding lung tissue. The colors have been preserved by filling the large cells with a fluid composed as follows:

Glycerine, ...	Oss.
Dense solution of gum Arabic, . . .	Oj.
Saturated solution of acetate of potash, .	Oiss.

The cells are made by cementing to a square piece of plate glass a rubber ring, five inches high and five broad, covering the cell, when filled with the fluid, with a round cover-glass. These cells are four inches in diameter. The cement used is known as "Van Stan's Stratena," and being made with acetic acid, is not affected by the fluid of the cell. Before the rubber ring is fastened to the glass a triangular cork is cut in it, at two places, so that if the fluid becomes discolored, as in mounting specimens too quickly, the original fluid may be drained away and fresh fluid supplied. Large hypodermic needles and a syringe are of use in this operation. Air bubbles may also be removed in this way. The specimens exhibited had been mounted for one month, and they are apparently as fresh as ever.

The eight specimens exhibited the lesions of pure venom of the rattlesnake, the lesions of the three globulins, and the peptone which composes the poison.

THE MEDICAL SOCIETY OF THE STATE OF TENNESSEE.

Annual Meeting, held at Chattanooga, April 8 and 9, 1884.

(Specially reported for THE MEDICAL NEWS.)

THE fifty-first annual meeting of this Society was held at Chattanooga, and was a success, both in regard to the value of the papers read and the character of the representation.

APRIL 8TH, FIRST DAY. MORNING SESSION.

The Society met at the Hall of the Iron and Coal Association, at 11 A.M., and was called to order by THE PRESIDENT, DR. A. B. TADLOCK, of Knoxville; he appointed as a *Committee on Credentials*, Dr. B. B. Lenoir, Dr. W. F. Glenn, and Dr. D. D. Saunders.

Hon. Hugh Whiteside, Mayor of Chattanooga, then delivered an *Address of Welcome*.

PRESIDENT'S ADDRESS.

DR. A. B. TADLOCK then read his address, in which he ably discussed the general bearings of medicine and its relationship to the public. The necessity for legislation to prevent incompetent practitioners was considered, and it was stated that thirty-three of the States had such laws, whilst Tennessee had none.

AFTERNOON SESSION.

The Society was called to order at 2 P.M. On motion the President and Secretary were instructed to send greetings by telegram to the State Medical Association of Alabama, now in session at Selma.

DR. MASTERS, of Knoxville, then read a paper on *The Hygiene of the Eye*.

SECRETARY'S REPORT.

DR. C. C. FITE, of Nashville, then read his report, in which he called attention to the fact that this State was an asylum for travelling quacks. Most of our sister States have, by requiring diplomas and by strict examinations, shut out this horde of vampires, and so they are fattening on our people. We are maintaining our reputation for hospitality, and open wide our doors and welcome them. We, as a profession, he said, ask no protection; we ask no class legislation in our behalf, but for the ignorant masses we should demand protection of our law-makers, and if we unite our efforts we can do it almost without serious opposition.

The report was received and approved.

LICENSE TO PRACTISE.

DR. SAUNDERS moved that a committee be appointed to memorialize the Legislature to secure a law requiring registration and license to practise.

DR. GIBBS moved an amendment that the committee to be appointed prepare a bill, after comparison of all laws on the subject that are obtainable, and that this bill, so prepared, be discussed at an adjourned meeting to be held at Nashville on the first Tuesday in October.

DR. J. BERRIEN LINDSLEY spoke in favor of postponing action, and was in favor of the better organization of the profession in Tennessee.

Dr. Saunders's motion was then carried, after the amendment had been tabled.

Upon motion it was decided that the committee report to-morrow what plans they would pursue, and the following committee was appointed by the President:

Drs. D. D. Saunders, W. W. Taylor, Memphis; Drs. J. H. Van Deman, H. L. McReynolds, Chattanooga; Dr. R. F. Evans, Shelbyville; Dr. W. F. Clary, Bellbuckle; Dr. J. F. Grant, Nashville.

THE TREASURER, DR. ROBERTS, then made his report, which was referred to an Auditing Committee.

THE COMMITTEE ON CHANGES IN THE CONSTITUTION

then reported the results of their deliberations, and the afternoon session was devoted to its consideration.

The Constitution as amended was adopted. The most important change was one requiring five dollars as an initiation fee; two dollars as annual dues from members present at a meeting, and one dollar from the members absent, this entitling them to the *Transactions*.

The Board of Censors was abolished, and a Judicial Council, to be composed of the Ex-Presidents, was established.

APRIL 9TH, SECOND DAY. MORNING SESSION.

Papers were read by Drs. M. Davis, of Knoxville; H. Berlin, of Chattanooga; J. G. Sinclair, of Nashville; R. F. Evans, of Shelbyville; J. Blankenship, and Rathmell, of Chattanooga; A. J. Swaney, of Castalian Springs; W. M. Vertrees, of Nashville; and S. T. Hardison, of Lewisburg.

A telegram of thanks for greeting sent was received from the Alabama Medical Association.

AFTERNOON SESSION.

Dr. G. A. Baxter, of Chattanooga, being called upon by the Society, read a paper on *Uncomplicated Spinal Shocks.*

Dr. Glenn made some remarks upon *The McDade Treatment of Syphilis*, affirming that in his own large experience, and the Marine-Hospital experience of Dr. Douglass, in Nashville, it was a complete failure.

Dr. Saunders confirmed Dr. Glenn's conclusion.

STATE BOARD OF HEALTH.

Dr. J. B. Lindsley, President of the State Board of Health, read a communication from the State Board of Health upon the subject of vital statistics.

Dr. W. T. Hope offered the following motion: "*Resolved*, That the President appoint a committee of five on the State Board of Health, whose special duty it shall be to aid in the passage by the next General Assembly of a satisfactory law upon vital statistics." Carried.

ELECTION OF OFFICERS.

Dr. Hope nominated Dr. D. D. Saunders, of Memphis, for *President*, and he was elected by acclamation.

Dr. A. J. Swaney, of Middle Tennessee; Dr. W. T. Hope, of East Tennessee; and Dr. T. J. Reid, of West Tennessee, were elected *Vice-Presidents.*

A motion to proceed to the election of a *Secretary* was laid upon the table, as the Society was well pleased with its present Secretary, Dr. Fite. The Secretary having declined a reëlection, the Society retains him by having no one elected in his stead.

Dr. Deering J. Roberts was elected *Treasurer.*

EVENING SESSION.

THE COMMITTEE ON MEMORIALS TO THE LEGISLATURE presented the following:

To the Honorable Legislature of the State of Tennessee.

We, a committee appointed by the Tennessee Medical Society, at its last meeting at Chattanooga on April 8, 1884, beg leave to state that, from our personal knowledge, the people of this State, which you have the honor to represent, are being imposed upon in body and person, and in many instances permanently injured in health, and even killed, by ignorant and unauthorized persons who call themselves doctors, and who have no diplomas from recognized medical schools or certificates from authorized medical boards. We deem it our duty to make you conversant with these facts, that you may, as the regular and proper guardians of the peace, happiness, and lives of the people, take such legislative action as may protect your people from this source. So far as the regular profession of medicine is concerned, we wish you to understand that we ask your action not for ourselves, but in behalf of your own people, leaving us to take care of ourselves, which we claim to be able to do.

We would most respectfully suggest in the accomplishment of the above object that you may partially effect it by passing an act which prohibits the collection of medical fees by any other than a similarly legalized physician.

On motion, the report of the committee was received, and the committee continued.

THE COMMITTEE ON VITAL STATISTICS

was appointed, as follows, at the request of the State Board of Health: W. T. Hope, Chattanooga; F. L. Sim, Memphis; R. Cheatham, Nashville; J. B. Murfree, Murfreesboro; J. S. Nowlin, Nashville, Chairman.

The Judicial Committee reported that the name of Dr. R. J. Hoyle, of Farmington, Tenn., be

DROPPED FROM THE ROLL OF MEMBERSHIP

on account of irregular practices. Dr. Hoyle was expelled, and the Secretary was instructed so to notify him.

Dr. W. W. Taylor introduced the following resolution in reference to

COUNTY MEDICAL ORGANIZATION:

Resolved, That a committee be appointed on county medical organization, to consist of three members, one from each section of the State. Adopted.

Drs. H. L. McReynolds, of Chattanooga; A. J. Swaney, of Castalian Springs, and W. W. Taylor, Chairman, of Memphis, were appointed the committee.

SIMS MONUMENT FUND.

The following resolution of Dr. P. D. Sims was then adopted:

Resolved, That the Tennessee State Medical Society appropriate to the Marion Sims Monumental Fund the sum of fifty dollars, and that the Treasurer of the Society be and he is hereby instructed to forward from the fund of the Society this amount to Dr. Maury, of Memphis, the custodian of said fund in Tennessee.

The following were appointed by the President

DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION:

Drs. Duncan Eve, of Nashville; W. F. Glenn, of Nashville; C. C. Fite, of Nashville; J. B. Lindsley, of Nashville; R. A. Hardin, of Savannah; W. A. H. Coop, of Savannah; J. G. Sinclair, of Nashville; G. B. Thornton, of Memphis; D. D. Saunders, of Memphis; A. J. Swaney, of Castalian Springs; R. F. Evans, of Shelbyville; W. T. Briggs, of Nashville; W. R. Townsend, of South Pittsburg; W. M. Vertrees, of Nashville; A. B. Tadlock, of Knoxville; J. H. Van Deman, of Chattanooga; G. A. Baxter, of Chattanooga; W. G. Bogart, of Sweetwater; H. H. Loveman, of Chattanooga.

The Society then adjourned to meet on the second Tuesday in April, 1885, at Nashville.

CORRESPONDENCE.

THE DISCOVERY OF THE SWINE-PLAGUE MICROCOCCUS.

To the Editor of The Medical News.

Sir: In your issue of April 5th is a communication from Dr. Gradle, of Chicago, which contains some rather surprising assertions, coming, as it does, from a man of scientific pretensions, and the author of a work on the "Germ Theory of Disease." As this is neither the first nor the second time that Dr. Detmers and his friends have accused me of injustice and misrepresentation, I propose in this communication to show what grounds these gentlemen have for making such serious charges, and I hope to make the matter so plain that even they may be satisfied. Fortunately, the points at issue are matters of record, and the original evidence

can be consulted by anyone who desires the facts, uncolored by the views of interested parties.

In my article in *Science* (vol. iii. p. 155), I endeavored to give references for all dates and all important statements that were made. If any of these were inexact, I shall be happy to correct them when the error is pointed out; but I cannot accept a general assertion of injustice and untruth as sufficient basis for modifying conclusions that were only given to the public after mature consideration.

Dr. Gradle has made a few definite statements of his own, however, to which I wish to call attention. He admits that micrococci had been described before Detmers' investigations were made; and he might have added that bacilli had also been described, and the disease attributed to them. What evidence there was at the time indicated that the disease was caused by a bacillus? Klein had just announced that this was the case, and had given careful descriptions and drawings of the organism, and a long series of experiments which he considered conclusive.

Detmers, coming immediately after Klein, also asserted that the organism was a bacillus, largely, as he has since informed us (*American Naturalist*, xvi., 1882, p. 198), because of Klein's investigations; but he so completely failed to give any credit to Klein that no one would have surmised from his original reports that there was such a man in existence. It was not until it was found necessary to get rid of the bacillus theory that Klein was referred to at all, and then only to make him responsible for the error.

It is admitted by Dr. Gradle that Dr. Detmers committed "a mistake in the description of, and name given to the parasites." Dr. Gradle does not seem to regard this as a very serious error; but he forgets that the question at issue at that time was as to whether this organism was a bacillus or a micrococcus. Dr. Detmers decided that it was a bacillus, and since it has turned out to be a micrococcus, he is naturally very anxious to have us believe that he meant micrococcus all the time. To explain his mistake it has been necessary to tell us that his lenses were so insufficient that he could not tell a micrococcus chain from a bacillus rod; and yet on the same page with this admission Dr. Gradle has the assurance to assert, what Dr. Detmers has asserted many times before, viz., that Dr. Detmers invariably found a specific kind of bacteria. These gentlemen seem to forget that a lens which is insufficient to discriminate between a micrococcus and a bacillus must fail still more disastrously if the attempt is made to discriminate between the different varieties of micrococci or of bacilli. As a matter of fact, however, I think few microscopists who have worked with Hartnack objectives will be willing to accept the conclusion that these are as imperfect as Dr. Detmers would have us believe. Indeed, Dr. Detmers never hinted at this himself until it became necessary to explain the radical mistake referred to; on the contrary, he went so far as to examine the dew on the grass with this same objective, and asserted most positively that he found in it the specific bacilli which he invariably found in the blood and other material from sick hogs! (Special Report, No. 12, p. 41.) When it is remembered how very difficult it is, how impossible I might say, to recognize many of the different species of bacteria even with the very best objectives that are now made, the absurdity of claiming to do this with a lens under which a micrococcus chain looked like a bacillus rod, becomes very striking.

Further on, Dr. Gradle says, "The error in the botanical description was hence corrected the following year (Special Report No. 22, p. 60)." Referring to this report, I beg the reader to recall the drawings, which are intended to be faithful representations of what he saw. Take figures 1, 2, 3, 4, 6, 10, 11, 12, 15, 16, 17, and tell us how in the world the rod-shaped objects shown in them can be classed as micrococci? Take central Fig. 3, in the first third of the plate, or the large central unnumbered figure in the middle of the plate, each representing the supposed bacteria of swine-plague, and if the organisms shown in these are not typical bacilli, then I would like Dr. Gradle to explain what they are, and to give some authority for naming them differently. If they were considered to be micrococci, why do we find under nearly every drawing the words bacilli or rod-shaped schizomycetes? Surely micrococci are not rod-shaped. It is to be remembered that at the time this report was made, Dr. Detmers possessed a Tolles lens, and that, consequently, the defective-objective excuse no longer applies. In this connection, I beg to call attention to a sentence on page 59, Special Report No. 22, which both Detmers and Gradle appear to have overlooked. It reads as follows: "The objectives used were a one-ninth imm., or No. 8 Hartnack [the same objective used in the investigations of the preceding year, D. E. S.], a one-sixteenth imm., or No. 10 Hartnack, and a one-tenth oil or balsam index imm., of Tolles, of recent make and superior quality. The results, in all cases, have been essentially the same."

We will now briefly consider the evidence which, it is claimed, Dr. Detmers furnished in his first report to show that swine-plague was caused by micrococci. Of course we do not forget in the meantime that the bacteria found were then called bacilli, and described as rod-shaped; and some of my readers will doubtless wonder how Dr. Gradle can now be so sure that they were micrococci; it is a difficulty which he can doubtless explain, but which is rather more than I care to grapple with. Dr. Gradle endorses these experiments in the following unqualified terms, to which I call special attention, because I want to show how good a judge he is of this class of investigations, of which he seems to be making a specialty: "Since all precautions necessary to render such experiments faultless were fully carried out, no flaw can be detected in Detmers' demonstration of the bacterial origin of the disease." (Dr. Gradle's letter in THE MEDICAL NEWS, p. 401.)

The first experiment was a cultivation of the germs, and I think the reader will be interested in knowing how this was done. "On September 23d," we are told, "Prof. Burrill charged two drachms of fresh cow-milk with a mere speck, smaller than a pin's head, of a decaying morbid growth, or ulcerous tumor of the cæcum of pig No. 5, and kept the vial well closed, at a temperature of 92° F." (Special Report No. 12, p. 37.)

Most investigators, when they attempt to make a cultivation, use some precautions to obtain their virus in a condition of purity. In this case a decaying, ulcerous tumor of the intestine, which any one of experience knows would be certainly contaminated with the bac-

teria of putrefaction, was the material chosen. Suppose, for the sake of argument, it was originally free from such contamination, can any one imagine how it could be carried to the laboratory and placed in a cultivation apparatus without coming in contact with the numberless germs found everywhere in the air? Then comes the cultivation liquid, fresh cow-milk. No attempt to sterilize—no means of getting rid of the germs which fall into this liquid during the process of milking, or which always adhere to the vessels into which it is received. What wonderful precautions! Then the cultivation apparatus—a vial! Surely no comments can add to the force of the author's own language. This virus was not carried to a second cultivation, but a single animal was inoculated from the first. Now, admitting that the pig inoculated contracted swine-plague from this milk, what is there to show that the virus multiplied? Is it not just as likely that a simple dilution to that extent would have produced the same effect? I have shown that chicken-cholera virus might be diluted to seventy thousand times its volume and still be active. and Davaine long before demonstrated the activity of septicæmic virus when diluted with a hundred million or even a trillion times its volume. Is there anything unreasonable in concluding that these two drachms of milk might have become virulent by the simple dilution of the added virus?

This milk contained bacilli figured as distinctly as it is possible to draw such organisms, and which any one can see were neither "serrated" nor "moniliform" by examining drawings 3 and 4 under Section 3 of the plate accompanying Dr. Detmers's report in Special Report No. 12.

The second experiment is even more remarkable in some respects. The idea was to remove the bacteria by filtration from the virus and show that the liquid freed from these was harmless. To this end blood serum from the diseased lungs of a pig was filtered through eight filters on October 8. It still contained "bacillus germs." October 9, the filtrate was filtered again through two filters. October 14, the same filtrate was filtered through four papers. As no bacteria could be found in the filtrate after the last filtration, the liquid was used for the inoculation of one pig. No disease resulting, it was concluded that the active principle of the virus was the bacteria which in this case had been filtered out.

Now a certain number of hogs are insusceptible to cholera just as a certain proportion of other animals and men are insusceptible to most other contagia. Suppose the single pig used for this experiment had been one of the insusceptible ones, what would the experiment have proved? Again, Dr. Detmers tells us that "In all animal substances the bacilli and their germs are destroyed, or at least disappear, as soon as putrefaction sets in." (Special Report, No. 22, p. 30.) The serum in the experiment in question was preserved in a bottle for seven days, being repeatedly exposed to the air in the meantime during filtration. And as this occurred during the warm weather of the second week in October, is it out of reason to ask if in this case putrefaction might not have had something to do with the loss of virulence? I know from experience that this virus frequently loses its activity from putrefaction in less than a third of the time which it was kept in this instance.

These are the experiments which Dr. Gradle so confidently refers to as having been made with all necessary precautions, and to be without flaw! How either of these experiments indicate that the germ is a micrococcus rather than a bacillus is a question which I leave for Dr. Gradle to clear up; it certainly is beyond the reach of ordinary mortals.

Another assertion is as follows: "The description of the characteristic mode of grouping, and the drawing of the parasites in the first two reports, as well as in the later one of 1880, show that Dr. Detmers really dealt with the same micro-organisms in all these instances." This statement is diametrically opposed to the facts. The bacilli figured in Dr. Detmers' first two reports are no more like the micrococci which he described later than a bat is like a ball, nor is there anything characteristic in any of the groupings. All of Dr. Detmers' drawings and conclusions show unmistakably that his material was contaminated with septic bacteria of various kinds. The micrococci of swine-plague are motionless micrococci, with nothing in their form, size, or grouping to distinguish them from some other varieties of micrococci. And when Dr. Detmers tells us that they develop into a dumb-bell organism with a flagellum, and that they swim about the field with an independent motion, we cannot avoid thinking of bacterium termo. When he goes further, and tells us that he has always seen rods, and even helobacteria, and believes his micrococci develop into these, I am perfectly satisfied in my mind that his virus was not pure. If Dr. Gradle wishes to advocate Detmers' views—that a micrococcus may exist in all the different forms usually ascribed to the various genera of bacteria, excepting the single one of spirillum, he is at perfect liberty to do so; but surely those of us who know how ridiculous such views are in the light of modern science, have an equal right to reject them.

The question, however, is not whether Dr. Detmers saw and described bacilli or micrococci—both of these forms had been described and figured before his investigations. His only claims to originality can be in proving that one of these organisms is capable of producing the disease. This he never did, nor has he ever made any experiments which throw the least light on this contested question. His methods of cultivation are insufficient from every standpoint, and cannot, by any ingenuity, be made to touch the points claimed in such exaggerated language by Dr. Gradle. In the very last paper which Dr. Detmers has written on the subject, he expresses the view which he has clung to from the first —that the micrococci, the swimming, dumb-bell-shaped organisms, the rods, and the helobacteria, are all one and the same organism, in different stages of existence. (*American Naturalist*, March and April, 1882.) A single pure cultivation would have revealed to him this radical mistake; and the fact that he still holds this error is proof positive that he never made such a cultivation. If, then, he was never able to separate the micrococci from the rod-shaped bacteria—and holding, as he does, that both are one and the same organism he cannot reasonably make such a claim—then it requires no other evidence to show that he could not possibly have proved either the one or the other of these forms to be the real cause of the disease.

D. E. SALMON, D.V.M.

WASHINGTON, D. C., April 9, 1884.

NEWS ITEMS.

NORTH CAROLINA.

(From our Travelling Correspondent.)

SHAW UNIVERSITY is situated in Raleigh, N. C., and an account of a recent visit to it may interest your readers. It is one of a dozen similar institutions founded over the South by the American Baptist Home Missionary Society for the education of the negroes. It has an industrial, normal, academic, theological, and medical department, to which a law department will shortly be added. Four hundred and fifty students, of both sexes, and six large buildings, on a campus of twelve acres, attest its success.

The want of colored medical men for their own race has been widely felt in the South, and even the State Legislature has set its seal of approval upon this effort to provide for the want by giving the land upon which one of the two medical buildings stands.

The medical department is only in its second year, and has fourteen students. The Faculty at present consists of three professors, one from Vermont, and the other two, leading practitioners in Raleigh. They have wisely decided that, in view of the limited early education of the negroes, the medical course shall be four years, both to give a thorough graded course, and the opportunity to study Latin and other branches in the academic department.

If the black man is to enter medicine, he must expect just what the white man does—a fair fight and no favors. If inferior in education and skill, he will go to the bottom; if superior, he ought to get to the top. Hence "thoroughness" is the especial aim at Shaw. And the examinations I heard were admirable. One student went through nearly every point in the sphenoid bone with but two or three mistakes; another gave a careful and intelligent account of the histology of bone; and another of the kidney. Altogether, the anatomical examination would have done credit to any of the schools in your own city. The other examinations I attended were in physiology and practice, and were nearly as good as the first.

Clinical facilities are as yet wanting, but it is proposed to build a pavilion ward of twenty beds very soon, and the city has agreed to furnish all the medical supplies needed for it. This will enable students also to have some clinical facilities in the medical specialties, to which the fourth year is entirely given up.

Having begun so lately, the school is almost destitute of library, museum, and other means of illustration, and any of your readers would do a good service by sending contributions to any of these departments. They have some of Auzoux's models, an excellent microscope, and a fair, though limited, chemical equipment.

The faculty is united, progressive, and laborious. The students are intelligent, enthusiastic, and industrious, and in their earnest struggle for an honorable means of self-support, they ought to receive good wishes and a hearty support.

YELLOW FEVER AT HAVANA. — Sanitary Inspector Daniel M. Burgess, U. S. M. H. S., stationed at Havana, reports 502 deaths, from all causes, in that city during the month of March last. Of these 9 were from yellow fever, 6 from typhoid, and 9 from "pernicious" fever. Of the 9 from yellow fever, 7 occurred in the Military Hospital, and 2 among civilians. He says there were 16 cases of yellow fever at the date of his report (April 3); but for the last month it has not been malignant in character, a very large percentage recovering. He adds: "The diagnosis 'pernicious fever' is made in this city very carelessly and loosely, in many cases by the physicians here, and though I have no doubt it usually is intended to convey the idea of a disease of malarial or paludal origin, I am nevertheless confident that not an insignificant proportion of such cases, and particularly deaths, are true yellow fever."

THE UNITED STATES AT THE INTERNATIONAL SANITARY CONGRESS. — Notification has been received by Surgeon-General Hamilton, through the Secretary of the Treasury, that the Secretary of State has designated Prof. C. F. Chandler, of Columbia College, New York City, as Honorary Commissioner of the United States to the International Sanitary Congress, to be held at the Hague, on the 21st–27th of August, 1884.

AMERICAN SURGICAL ASSOCIATION.—The next meeting of the American Surgical Association will be held on April 30th, and May 1st, 2d, and 3d, in the Lecture-Room of the National Museum, Washington.

The following papers will be presented:

Dr. S. D. Gross, Phila.—Wounds of the Intestines.

Dr. Moses Gunn, Chicago—The Philosophy of Manipulation in the Reduction of Hip and Shoulder Dislocations.

Dr. J. Collins Warren, Boston—The Healing of Arteries after Ligature.

Dr. J. C. Hutchison, Brooklyn—Transfusion.

Dr. S. W Gross, Phila.—Gastrostomy, Œsophagostomy, Internal Œsophagotomy, Combined Œsophagotomy, Œsophagectomy, and Retrograde Divulsion in the Treatment of Strictures of the Œsophagus.

Dr. J. W. S. Gouley, New York—Some Points in the Pathology and Surgery of the Prostate.

Dr. David W. Cheever, Boston—Some of the Dangers and Disadvantages of Anæsthetics.

Dr. Basil Norris, Surgeon U. S. Army, Washington—Extirpation of the Tongue.

Dr. C. H. Mastin, Mobile—Prostatic Calculi, Cases and Specimens.

Dr. Henry F. Campbell, Augusta, Ga.—Artificial Respiration in the Sitting Position.

Dr. P. S. Conner, Cincinnati—Traumatic Cephalhydrocele.

Dr. Donald Maclean, Detroit—Clinical Notes.

Dr. J. Ewing Mears, Philadelphia—A Contribution to our Knowledge of the Pathology of Trifacial Neuralgia.

Dr. David Prince, Jacksonville, Ill.—Unsettled Questions in Relation to Injuries to the Head.

Dr. George W. Gay, Boston—Tracheotomy in Croup.

Dr. Stephen Smith, New York—Does the Practice Keep Pace with the Science of Surgery?

Dr. John B. Roberts, Philadelphia—The Localization of Perinephric Inflammation by Means of Chemico-anatomical Study.

Dr. William A. Byrd, Quincy, Ill.—Trephining for Insanity Following a Depressed Fracture of the Skull.

Dr. W. S. Tremaine, Surgeon U. S. Army—Suprapubic Lithotomy.

Dr. L. McLane Tiffany, Baltimore—Ligation of Common Femoral Artery.

Dr. John S. Coleman, Augusta, Ga.—The Multiple Wedge Principle in the Treatment of Organic Strictures of the Urethra.

Dr. W. W. Keen, Philadelphia—A Case of Dermoid Cyst Opening into the Bladder in a Male.

Dr. N. Senn, Milwaukee—Experimental Researches on Cicatrization in Bloodvessels after Ligature.

Dr. John H. Brinton, Philadelphia — Intrauterine Compound Fractures.

Dr. Joseph W. Thompson, Paducah, Ky.—Surgery of the Hand, Especially as Applied to Railroad Injuries.

Dr. John A Comingor, Indianapolis — Anæsthesia and Plaster-of-Paris Bandage in the Treatment of Sciatic Neuralgia.

Dr. B. A. Watson, Jersey City — An Experimental Study of Anæsthetics.

Dr. E. H. Gregory, St. Louis—Subject not announced.

Dr. W. W. Dawson, Cincinnati — Subject not announced.

Dr. Charles B. Nancrede, Philadelphia—Surgical Interference in Cerebral Abscess.

Dr. William T. Briggs, Nashville — Trephining for Epilepsy.

The South Carolina Medical Association will hold its annual meeting at Florence on Thursday, the 22d inst.

The Texas State Medical Association will meet in annual session at Belton on the 22d of April.

The Medico-Chirurgical Faculty of Maryland will hold its annual meeting in Baltimore on Tuesday next. The annual address will be delivered by Dr. William Pepper, on "Some Practical Views on Dietetics in Disease," on Wednesday at 1 P.M.

Canada Medical Association.—The next meeting of this Association will be held in Montreal on August 25th, 26th, and 27th; and the meeting of the British Association for the Advancement of Science begins in that city on August 27th.

The Kansas City Medical College held its fifteenth annual commencement on March 5, and the degree of M.D. was conferred on seventeen candidates.

The University of Kansas City held the third annual commencement of its medical department on March 13, and the medical degree was conferred on fourteen candidates.

The Foot and Mouth Disease in Kansas.— Dr. D. E. Salmon, of the U. S. Department of Agriculture (Veterinary Division), reports that, from personal examination in Kansas, he saw nothing to indicate foot and mouth disease. The feet were separating—sometimes half way between fetlock and hock—as a consequence of dry gangrene. The mouth symptoms were very slight or entirely absent; when present they were of the nature of erosions—he saw no vesicles. He attributed the disease to ergot, of which there was a large quantity in the hay. This conclusion is contested by some, and experiments are now under way to show whether or not it is contagious.

International Health Exhibition, London, 1884.—A somewhat novel feature in connection with the exhibition this year will be the establishment of a library and reading room, a home for which the executive council have assigned in a large double room in the Albert Hall, overlooking the conservatory. Steps have been taken to secure a representative collection of works on vital statistics; of reports and regulations relating to public health; of regulations with reference to injurious trades and of works thereon; and of reports, statistics, and other works on the science of education. Foreign powers have been invited to lend their coöperation in this effort to create an international library of works of reference bearing on the two divisions of the exhibition, and several responses have already been received. India and the colonies have also been asked to contribute towards the same end. Publishers and authors have likewise been invited to forward copies of their works. In addition to the library of reference, there will be a reading room, to which the current numbers of periodical publications of a sanitary or educational character will be admitted. All books and periodicals sent to the library and reading room will, under certain regulations, be arranged for the use of visitors, and not merely for exhibition. The books will be submitted to the jurors, and a full catalogue will be issued. All parcels for the library and reading room should be addressed, carriage paid, to the Secretary of the Library Sub-Committee, Royal Albert Hall, London, S. W.

Health in Michigan.—Reports to the State Board of Health for the week ending April 5, 1884, indicate that inflammation of the bowels, bronchitis, and diarrhœa have increased, that pneumonia has considerably decreased, and that scarlet fever, inflammation of the brain, and measles have decreased in area of prevalence.

Compared with the average for the month of March in the preceding six years, cerebro-spinal meningitis was more prevalent, and pneumonia, rheumatism, and remittent fever less prevalent in March, 1884.

Including reports by regular observers and others, diphtheria was reported present during the week ending April 5, and since, at ten places, scarlet fever at seventeen places, and measles at eight places.

Obituary Record.—Pliny Adams Jewett, of New Haven, died of pneumonia, in Providence, on April 10th, aged seventy-two. He received his literary education in Trinity College, and his medical education at Yale College and in Paris. After studying in Paris he settled in New Haven. Subsequently he resided in Aiken, S. C., for two years, and then returned to New Haven.

Dr. Jewett made a specialty of surgery, and for thirty-five years has been attending surgeon at the New Haven Hospital. In 1856 he was elected Professor of Obstetrics at Yale College, and held this position for twelve years. During the War of the Rebellion he was a surgeon of volunteers, and was afterwards promoted to a colonelcy for meriterious service; he organized and had

charge of Knight's U. S. Army General Hospital, at New Haven, from 1862 to 1865.

NOTES AND QUERIES.

A YEAR'S WORK IN OVARIOTOMY.

To the Editor of THE MEDICAL NEWS.

SIR: In your last issue Mr. Lawson Tait says "that Professor Goodell is right in pointing out that Dr. Sutton's words are likely to give rise to a misunderstanding." Again, he says: "In order that the nature of my work may not be misunderstood, kindly allow me to say that last year I removed eighty-two tumors of the ovary and parovary," etc. Dr. Goodell made use of my remarks, before the Gynecological Society, in reference to Mr. Tait. I said, "so far as Mr. Tait is concerned, he does not remove many large tumors, those which weigh from sixty to sixty-five pounds with extensive adhesions." Such was the fact, which I observed in Mr. Tait's work in the summer of 1882. Mr. Tait cites his work in 1883. Of this work he says: "Two of these were very small dermoid cysts. The remaining eighty had an average weight of about twenty-seven pounds, the largest being about one hundred and twenty pounds, and the smallest eleven pounds."

Eighty tumors averaging twenty-seven pounds give a total of twenty-one hundred and sixty pounds; now if nine of these eighty tumors weighed sixty-five pounds each, and you add one tumor of one hundred and twenty pounds weight, you have seven hundred and five pounds to deduct from the aggregate weight of twenty-one hundred and sixty pounds, which he admits; this gives you the aggregate weight of the remaining seventy tumors at fourteen hundred and fifty-five pounds, an average of about twenty pounds to the tumor. Certainly, a class of twenty pound ovarian and parovarian tumors is rarely a bad one. But unless at least ten of these cases exceeded sixty pounds, my remark still holds good, viz., that *he does not remove many large tumors, those which weigh from sixty to sixty-five pounds with extensive adhesions.* I mean no disparagement of his work, its results are superb.

Very respectfully yours,
R. S. SUTTON, M.D.

PITTSBURG, April 15, 1884.

LIME INHALATIONS IN CROUP.

To the Editor of THE MEDICAL NEWS.

SIR: *Apropos* of lime inhalations in membranous croup, etc., a subject now being discussed in your columns, it might be well to call the attention of your readers to the following, from p. 549 of *Diseases of Children*, by J. Lewis Smith, M.D., of New York, fifth edition, 1881:

"It has long been known that the vapor of slaked lime is an active solvent of pseudo-membranes, but the manner in which it has frequently been employed is inefficient. Many physicians place the unslaked lime in pans or dishes, add water to it, and place the child so that it inhales the vapor as it rises. This is little more than the inhalation of steam, as anyone may satisfy himself by holding a mirror or pane of glass over it, when he will perceive only a very slight deposit of lime on the glass. The proper way to employ it is with the atomizer," etc.

I think Prof. Smith deserves priority in this matter over some more recent writers. I have had no experience with lime in croup, but can attest the efficacy of a two per cent. solution of liquor potassæ, applied by means of the steam atomizer, having used it in several cases with most gratifying results.

Respectfully,
G. B. COWLEY, M.D.

GLASSVILLE, MO., April 9, 1884.

CORRIGENDUM.

IN our issue of last week, page 418, second column, fifth line, for "possible" *read* "impossible."

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 8 TO APRIL 14, 1884.

SMITH, JOSEPH R., *Major and Surgeon.*—Directed to represent the Medical Department of the Army at the annual meeting of the American Medical Association, to be held in Washington, D. C., on the 6th of May, 1884, and on the adjournment of the Association to return to his proper station (San Antonio, Texas).—*Par. 7, S. O. 81, A. G. O.*, April 8, 1884.

BAILY, JOSEPH C., *Major and Surgeon.*—Leave of absence extended three months.—*By Par. 8, S. O. 83, A. G. O.*, April 10, 1884.

PILCHER, JAMES E., *First Lieutenant and Assistant Surgeon.*—Assigned to duty at Camp Poplar River, Montana.—*Par. 2, S. O. 37, Headquarters, Department of Dakota*, April 7, 1884.

WALES, PHILIP G., *First Lieutenant and Assistant Surgeon.*—Ordered to report to the Commanding General Department of the Columbia, for assignment to duty.—*Par. 11, S. O. 84, A. G. O.*, April 11, 1884.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE-HOSPITAL SERVICE, FROM JANUARY 1 TO MARCH 31, 1884.

FESSENDEN, C. S. D., *Surgeon.*—To proceed to Cairo, Illinois, and Memphis, Tennessee, as Inspector, March 5, 1884.

PURVIANCE, GEORGE, *Surgeon.*—Granted leave of absence for thirty days, February 16, 1884.

SMITH, HENRY, *Surgeon.*—To rejoin his station at Norfolk, Virginia, March 7, 1884.

IRWIN, FAIRFAX, *Passed Assistant Surgeon.*—Relieved from duty at Norfolk, Virginia; to assume charge of St. Charles Quarantine Station, March 7, 1884.

CARMICHAEL, D. A., *Assistant Surgeon.*—To report to Surgeon Purviance for examination for promotion, March 5, 1884.

ARMSTRONG, S. T., *Assistant Surgeon.*—To report to Surgeon Fessenden for examination for promotion, March 5, 1884.

BENNETT, B. H., *Assistant Surgeon.*—Leave of absence extended ten days, January 18, 1884.

AMES, R. P. M., *Assistant Surgeon.*—Detailed for temporary duty on relief boat (Ohio River Flood Sufferers), February 16 and March 1, 1884.

DEVAN, S. C., *Assistant Surgeon.*—Upon expiration of leave of absence, to proceed to St. Louis, Missouri, for temporary duty, February 6, 1884.

KALLOCH, P. C., *Assistant Surgeon.*—To proceed to Charlestown, South Carolina, for temporary duty, February 1, 1884.

BEVAN, A. D., *Assistant Surgeon.*—Granted leave of absence for seven days, March 13, 1884.

WASDIN, EUGENE, *Assistant Surgeon.*—Granted leave of absence for fifteen days, March 4, 1884.

BATTLE, K. P., *Assistant Surgeon.*—To proceed to New York, N. Y., for temporary duty, February 4, 1884.

RESIGNATION.

COOKE, H. B., *Passed Assistant Surgeon.*—Resignation accepted by the Secretary of the Treasury, to take effect February 5, 1884. January 31, 1884.

APPOINTMENT.

BATTLE, KEMP P., M.D., of North Carolina, having passed the examination required by the Regulations, was appointed an Assistant Surgeon by the Secretary of the Treasury, February 2, 1884.

PROMOTIONS.

CARMICHAEL, D. A., *Passed Assistant Surgeon.*—Promoted and appointed Passed Assistant Surgeon, by the Secretary of the Treasury, from March 1, 1884. March 18, 1884.

ARMSTRONG, S. T., *Passed Assistant Surgeon.*—Promoted and appointed Passed Assistant Surgeon, by the Secretary of the Treasury, from April 1, 1884. March 28, 1884.

THE MEDICAL NEWS *will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.*

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS *should be addressed to No. 1004 Walnut Street, Philadelphia.*